















January, 1952

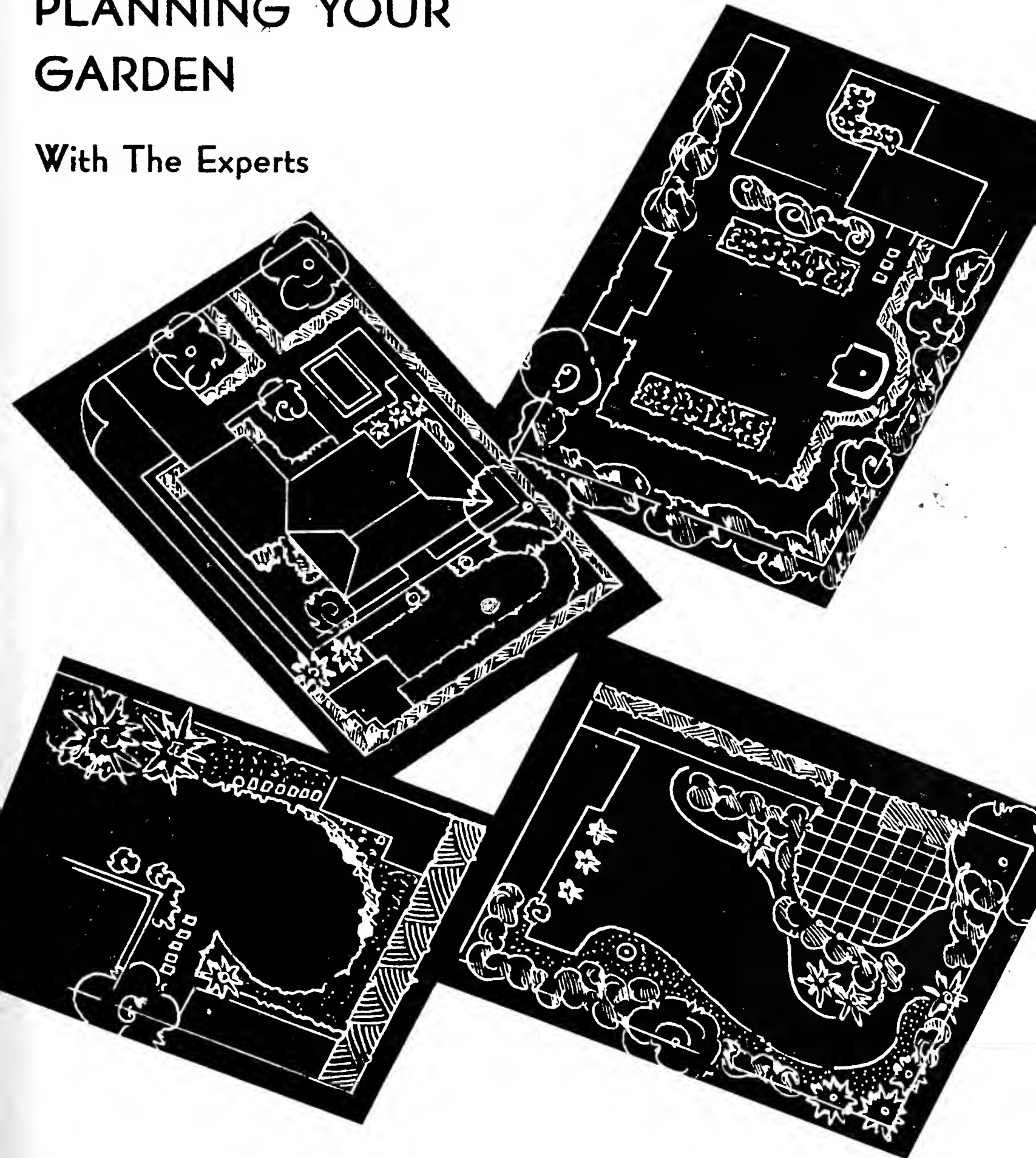
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# The Green Thumb

COLORADO'S GARDEN MAGAZINE

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# The Green Thumb

Vol. 9

JANUARY, 1952

No. 1

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*Decorations on both covers made especially for the Green Thumb by Jack Harenberg.*

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**THE COLORADO FORESTRY AND HORTICULTURE ASSOCIATION**

**1355 Bannock Street**

**• Denver 4, Colorado •**

**• Tabor 3410**



## ANNUAL MEETING AND DINNER

The committee has arranged for the auditorium of the A.A.U.W. at 14th and Josephine for our annual dinner this year. The Rocky Mountain Horticultural Conference will be separate this year as the only available time for that event is March 25-26.

Tickets for the Annual Dinner will be \$2.00 and we would urge every member to make their reservations at once as the room will only hold 10% of our membership and reservations will be made in the order of receipt.

The necessary business and annual election will be kept to a minimum. A short report of the year's progress will be made and George Kelly will give a review of the year's activities via ektachrome slides. These will include some of the most fantastic examples of Nature's sculpturing that have ever been exhibited.

The dinner will be served at 6:30 P. M.

Send your check at once or stop in at Horticulture House and get your tickets.

---

## COLLECT ANTIQUES AND HORRIBLES NOW

If you should be moving or hear of some one who is, there are always many things that it is not desirable to move but which someone would like to have. Let us know of these things and we will arrange for their storage until the next annual auction. Cleveland Garden Center makes a year round job of this collecting of "White Elephants" and finance very largely their activities in this way. We can do as much if everyone will make a year round job of collecting suitable material.

## MIDWESTERN SHADE TREE CONFERENCE

The seventh annual meeting of the Midwestern Chapter of the National Shade Tree Conference will be held February 13-15, 1952, at the LaSalle Hotel, Chicago. Problems of concern to those who are interested in the maintenance of ornamental trees and shrubs will be discussed. The convention is open to all who wish to attend. Those who have attended from Denver, the last few years, have found these sessions very much worth while. Often suggestions picked up here will save a great deal of time and trouble in maintaining trees. More particulars can be had from Horticulture House.

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## PASS IT ON

We plan to specialize in the next few issues of the Green Thumb. February will probably be "Planting"; March, "Plants"; April, "Pests"; and May, "Maintenance". Each of you members have probably had some garden experience that others would like to know about. Will you write us a paragraph or page? Don't worry about literary style. We will see to that if you have a good idea to pass on. Do it now before you forget.

---

## THE DENVER ORCHID SOCIETY

The increasing number of orchid growers will be interested in hearing that there was organized, on December 5th, a society for them. Judith M. King was elected Secretary-Treasurer. Her address is 830 W. Quincy, Englewood, Colo., and phone number is SUnset 1-4828. Meetings will be the second Thursday of each month in the members' homes. All amateur or professional growers of orchids are invited.



### Colorado Forestry and Horticulture Association

Organized in 1884

"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."

#### OFFICERS

President.....Mrs. John Evans  
Executive Vice President.....Mrs. A. L. Barbour  
Vice Presidents—Fred R. Johnson, Mrs. Robert M. Perry, Milton J. Keegan, S. R. DeBoer, Mrs. J. Churchill Owen, Mrs. George H. Garrey.  
Secretary-Treasurer .....Mildred Cook

## JANUARY SCHEDULE

Dec. 31-Jan. 1. Annual trek to Devil's Head Lookout to see the fireworks on Pikes Peak. Its a grand experience. Call for particulars.

Jan. 6. Seeing the mountains via snowshoes. Anyone can snowshoe and this allows winter hiking into the wild places of the mountains. This trip will be up the Urad Mine Road. Call for particulars.

Jan. 17, Thursday, 8:00 p. m. A treat for armchair mountaineers! A Green Thumb hiker's story of last summer's pack trip into the Snowmass Area. With pictures of hard to reach spots not often seen by the average campers. The program will begin at 8:00 p. m.

Jan. 20. Another winter hike to the First Creek area on Berthoud Pass. Snowshoes or skis, cars or bus.

Jan. 24, Thursday. Annual Dinner and meeting. At A.A.U.W. Auditorium, 14th and Josephine.

Feb. 3. Snowshoe hike into the Herman Gulch Area.

Reserve March 25-26 for the Annual Rocky Mountain Horticultural Conference. Held in Denver University's new Civic Center building.

If you will renew your membership promptly it will save bother for both of us. Thank you.

## THIS IS THE PLANNING ISSUE

We asked all the local landscape architects and designers to cooperate in giving ideas for designing home grounds in Colorado. They have responded well and we here reproduce several typical plans with explanation of the reason for them and in some cases a list of material.

Jack Harenberg made the drawings for front and back cover especially for this purpose.

Study these plans carefully and you will be able to glean many good ideas from them that you can use in your own development.

Remember that members can get a set of eight front yard plans drawn especially by S. R. De Boer with every new membership they send in.

### PLANT PALS

Here are the three beds which attract the most attention at my place when in bloom.

With evergreens for a background, purple ruellia bordered with perennial candytuft (*Iberis*) makes quite a show.

The most colorful flower bed I have consists of assorted *Dianthus* pinks mixed with blue bush morning glory.

A bit unusual and colorful is a bed of iceland poppies and blue *Campanula carpatica*.

MRS. AMELIA HUNTINGTON,

# PLAN BEFORE YOU PLANT

By GEORGE W. KELLY

THE hundreds of young folks who now have new homes need to learn the importance of having definite and accurate plans for the development of their grounds before they start to plant them. The inclination of many is to put in that Redbud tree that Aunt Harriet sent from Oklahoma, the tulip bulbs that the next door neighbor gave for Christmas, the two cute little Arborvitae trees that the loud talking man-on-the-truck-from-Texas sold them last fall and the Althea bushes that were ordered from the catalog with the beautiful pictures—all as they come, in the place that looks easiest to plant; with little consideration as to whether these particular things are the most suitable for the location and the effects desired. A carpenter or machinist would not attempt to build a house or a machine in that way. They would want detailed plans of the exact dimensions and specifications of the material to use.

It is possible to develop and carry plans in ones head so that all the parts of a planting will fit together when it is completed, but for the majority of us it is safer to put details down on paper so that they may be adjusted as necessary, and, when finally approved they can be preserved for the period of years necessary to complete the work. It is much easier and cheaper to move a tree or fence on paper than it is to do the actual job. Only on a flat piece of paper or a scale model can one see all the various parts of a plan at one time and fit them properly together.

It should be remembered that the plan on paper is, after all, just a register of accumulated ideas. These ideas should be assembled and classified and culled out at the earliest possible time

when building or buying is contemplated. The various members of the family might start a list of those things that they most wanted in a yard and garden. Put down everything as it is thought of—as you would a Christmas list—then gradually begin to eliminate the less necessary or impossible things and fit the remainder together, like a jig saw puzzle, into the space available.

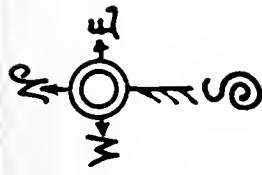
To have the groundwork to fit this puzzle together on you will find it convenient to draw up a plot of your grounds to scale so that, say, 8 feet equals 1 inch on the paper. Then mark in all the features that might effect your plan such as views, neighbors' fences, phone poles, garages and clothes lines, high and low spots, existing trees, etc.

If it is possible to begin this planning of the grounds at the same time that the architect makes his plans there is much to be gained. The first consideration is to be sure that the house is located to the best advantage on the lot. Usually this is not in the center of the lot. Consider sun for the important windows, views, both out and in, shade for the heat of the day, sun for the flower beds and protection from severe winds.

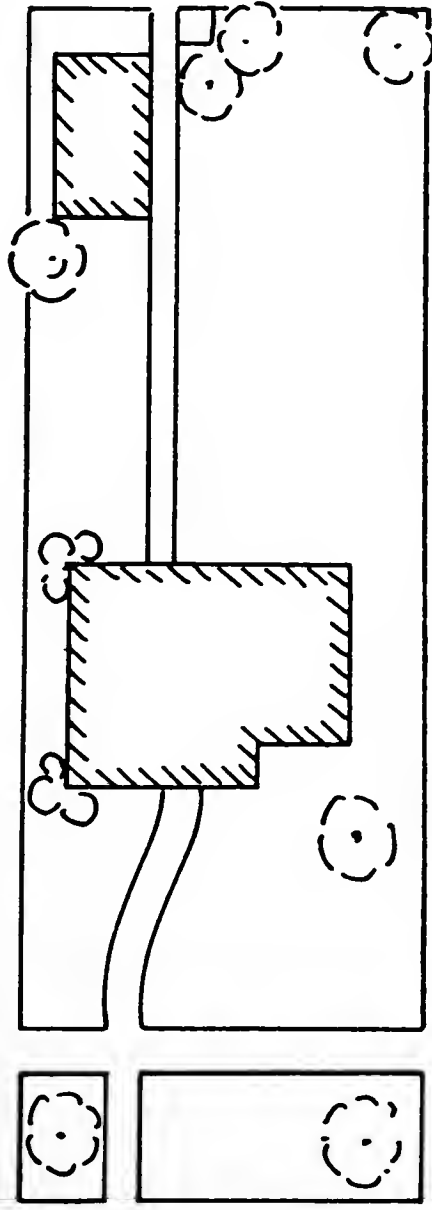
During and after the location of the house on the lot it is well to plan the general uses of the parts of the yard. Usually the front of the house is arranged so that it appears at its best to the passing public, so we often refer to the "front yard" as the public area. The modern trend is away from this strict division of the "Front" and "Back" of a residence and fits the "indoor" and "outdoor" rooms in

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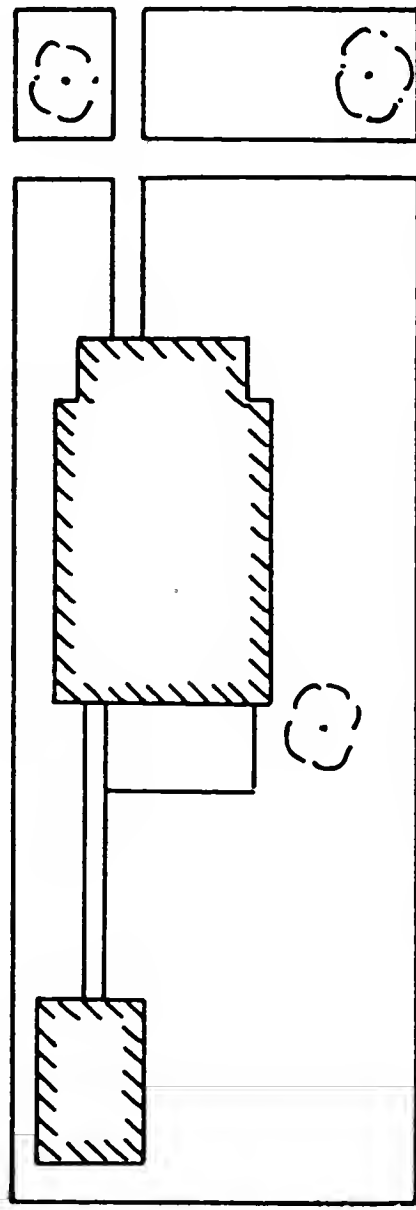
*Drawing on opposite page by M. Walter Pesman.*



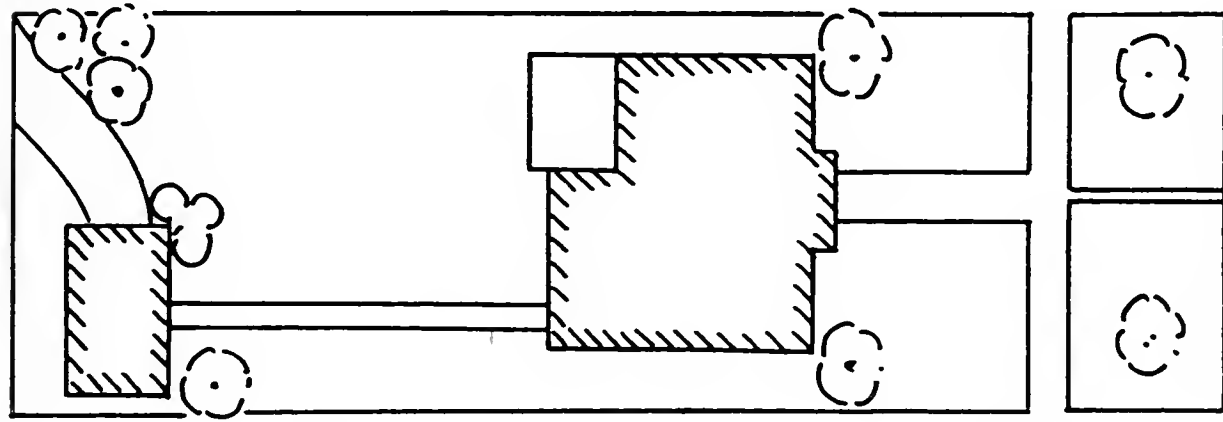
Scale in feet



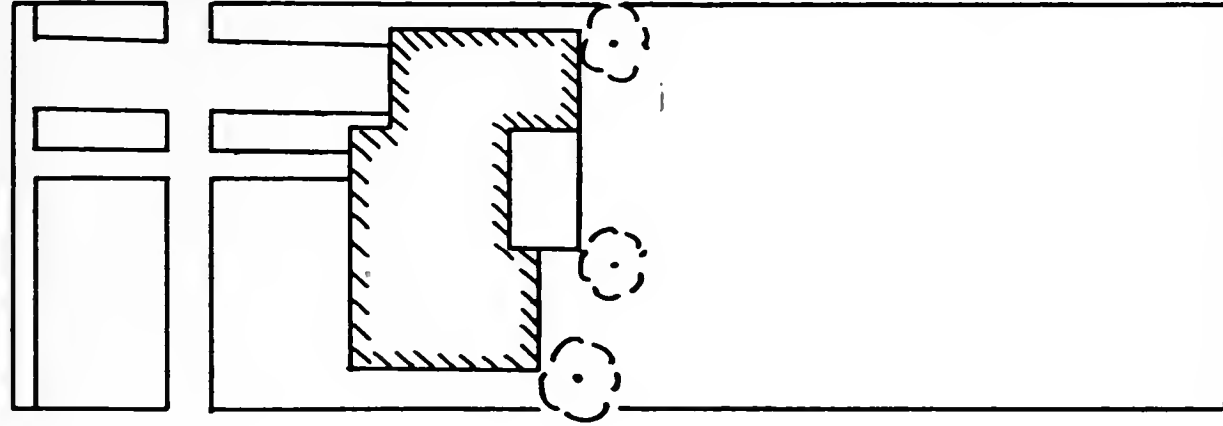
WEST FRONT



EAST FRONT



SOUTH FRONT



NORTH FRONT

# LOCATION OF HOUSE AND GARAGE ON LOT

the location where they will be most useful.

The utility features of the grounds can usually be grouped together. These might include the garage, ash-pit, incinerator, clothes lines, compost pits, tool shelters, drives and service walks. This makes the second general division of grounds or the "service area." Where these necessary features are grouped together and convenient to the service area of the house (the kitchen) there will be more room left for the more attractive parts of a home grounds.

Roughly that area or areas left after the exclusion of the public and service areas will embrace the third division of features, or the "garden". It is in this garden area that you may get the greatest pleasure in working out individual ideas for enjoyment in the out-of-doors. Here may be flowers, shady trees, platforms for rest, areas for various forms of recreation, and opportunities to play and work with many kinds of growing plants.

Now with these general areas outlined the details of construction can be planned. Suppose we start with the parking, if the lot includes such a feature, otherwise we will consider the front of the place, or at least that part of the house adjoining the street or entrance drive.

Here our first thought will probably be to frame the building with trees. Possibly a couple behind it for background and a couple at the front corners, if properly located and selected for size and character. Shade should also be a consideration, and one tree may serve several of these requirements at the same time. Set up stakes at each desirable spot, then look at them from every angle and move them around until they most nearly do the jobs wanted without being overcrowded. Consider whether a low, squat tree like a Hawthorn is

needed or a tall high-headed tree such as a Honeylocust. If it is still customary to plant "parking" trees in your block, remember that these trees are for landscaping of the street, rather than your individual house, so get the neighbors to go together and plan a whole row of trees along the street of the same kind and size. Do not make the mistake that so many did in the past of planting large-growing trees too close together, too close to building or near wires.

In addition to trees, a foreground planting would usually include a ground cover of green grass or some other material and possibly hedges to define boundries or carry out important lines of the house, and some small shrubs, evergreens or flowers to tie down the house with appropriate foundation plantings. At one time it was necessary to cover up foundations almost completely, as they were always of raw cement and anything but beautiful. In much of the modern architecture this ugly foundation line is missing and only a few appropriate plants are necessary to dress up a house.

Suppose the sides of the house were next considered. If the house was properly designed and fitted to the lot there would be only one "problem" side. That would probably be the north side or the side which was set as close as possible to the edge of the lot. In many old homes set on narrow lots there were two of these almost worthless, narrow passageways.

Some ingenious gardeners use these otherwise lost areas for the growing of shade loving plants like the ferns, primroses, tuberous begonias and Plantainlilies. Sometimes this space is largely used for necessary walks, and privacy may be obtained by the use of a tall fence or vines, or even a hedge.

Somewhere in here the plans should

be made for necessary fences, walls, gates, platforms, changes in level and screens. Walks and drives should be laid out where they will be serviceable and at the same time be as attractive as possible. Often, after these border and entrance features are laid out the areas left will suggest uses which will determine the character of the whole place.

Now is when the fun begins—planning the garden features. The completed plan may include a rose garden for one member of the family, a shady nook and pool for another, a playground for the children and borders of bright flowers arranged to exhibit their colors all season through.

As a foundation for all these delightful garden features there will probably be grass. Sometimes gravel, concrete, stone or water will be appropriate, in places, but a well planted and cared for lawn is hard to beat.

The architectural features of a gar-

den are very important for without them there is not the necessary civilizing influence of the domination of man over Nature. A well planned arrangement of garden furniture, wall fountains, walls, curbs, hedges and levels may so give character to a garden that it is beautiful even when there are no flowers or even leaves.

Even owners of small houses could well profit from the experience of a trained landscape architect, for their knowledge of the principles of good art and their knowledge of the qualities of various plants will guide a new home owner in the right direction and prevent many costly and unsatisfactory results. Some landscape architects will either arrange complete plans or give advice by the hour. Many modern nursery and landscape firms maintain trained men to help their customers plant the right thing in the right place.

## SOME NOTES FROM A BIRD-LOVER

By ENID ORTMAN

I'D LIKE a word about the squirrel: I do not argue for him or his preservation. Man, in his muddling, has so hopelessly upset the balance of Nature that the squirrel has become a real menace to our bird life. He has absolutely no economic value any more than a cat, and is equally as destructive as concerns birds because he dares go to parts of a tree that a cat cannot, and both the eggs and nestlings are great delicacies to him. One has only to watch the actions of birds during nesting season when a squirrel appears to learn to what extent he is hated and feared by the birds. No other testimony or evidence is needed of his status in that regard.

What little esthetic appeal he has centers mostly in his bushy tail.

The cat, everyone (whether he admits it or not) knows is a killer, in all species, the pampered, well-fed house cat being no exception. The few mice destroyed are no recommendation of his economic place in the scheme of things, but the shocking statistics of long years diligent research into his depredations against bird life is conclusive reason for his control. In spite of many attempts to gain legislation to that end, only two eastern states were successful in licensing the cat. The fight against insects which destroy millions of dollars worth of food stuffs each year and for which millions more dollars are appropriated, would be materially aided by strict control of the cat—I would even say extermination, which may seem extreme.



# PLAN FOR THE FRONT OF A MODERN HOME

By MAX CAPROY

Landscape Architect for Marshall Nurseries

**E**ACH home owner can have a landscape plan that fits the personality of the home as well as the personality of the home owner. A landscape plan is developed to present a more pleasing picture of the home and to add to its beauty. In this plan we have framed our picture with a heavy planting on the right and a lighter, but higher, planting on the left with the main interest on the chimney and flower box combination.

We have used as a feature planting an upright type of Juniper faced with a spreading Tamarix Juniper and backed with Oregon Holly off-set from the center of the chimney to create interest.

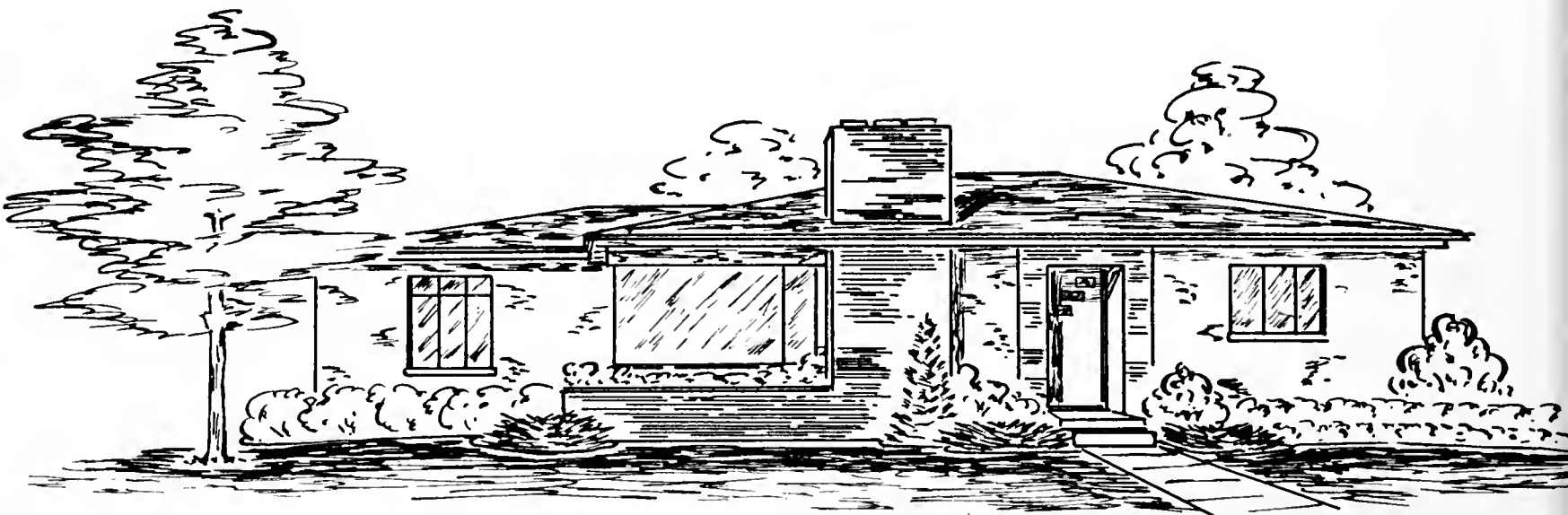
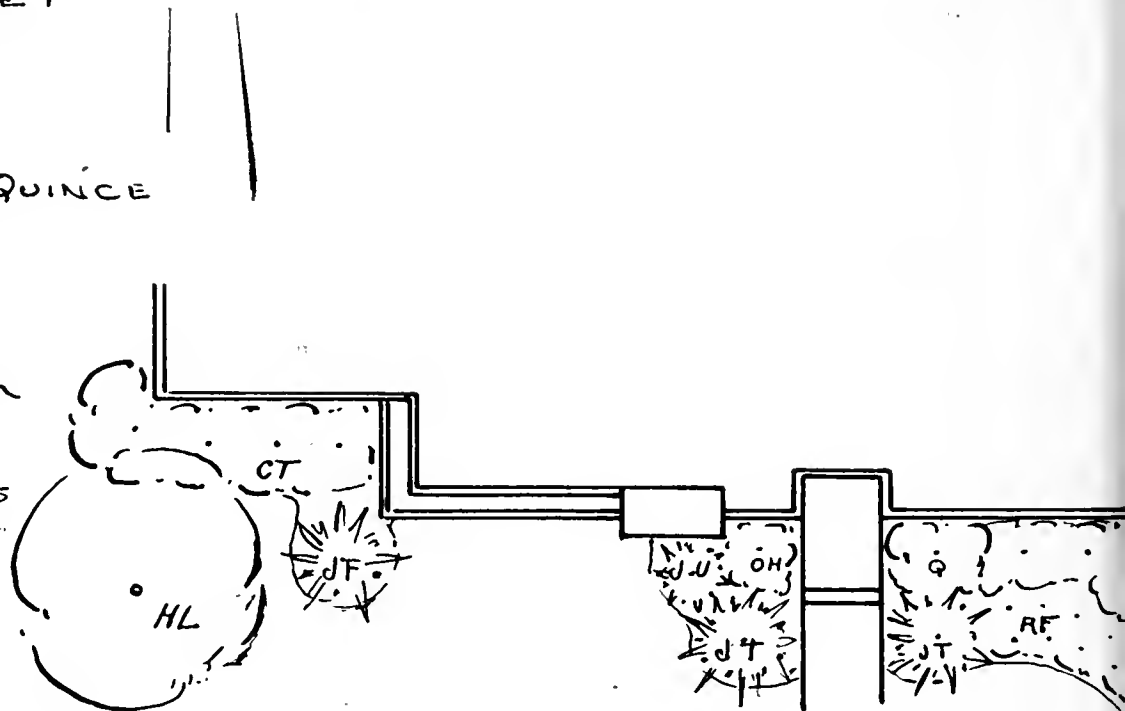
To the right of the door are a Flowering Quince, Green Barberry and Cranberry Bush as a back drop for the bed of Polyantha Roses. The Tamarix Juniper is used to balance with the planting to the left of the

## PLANTING KEY

- HL - HONEY LOCUST
- CT - COTONEASTER
- OH - OREGON HOLLY
- Q - CRIMSON BEAUTY QUINCE
- B - GREEN BARBERRY
- VC - CRANBERRY BUSH
- JF - PRITZER JUNIPER
- JT - TAMARIX JUNIPER
- JU - UPRIGHT JUNIPER
- RF - POLYANTHA ROSES

SCALE 1" = 1'

by  
Marshall Nurseries  
Max Caproy L. A.





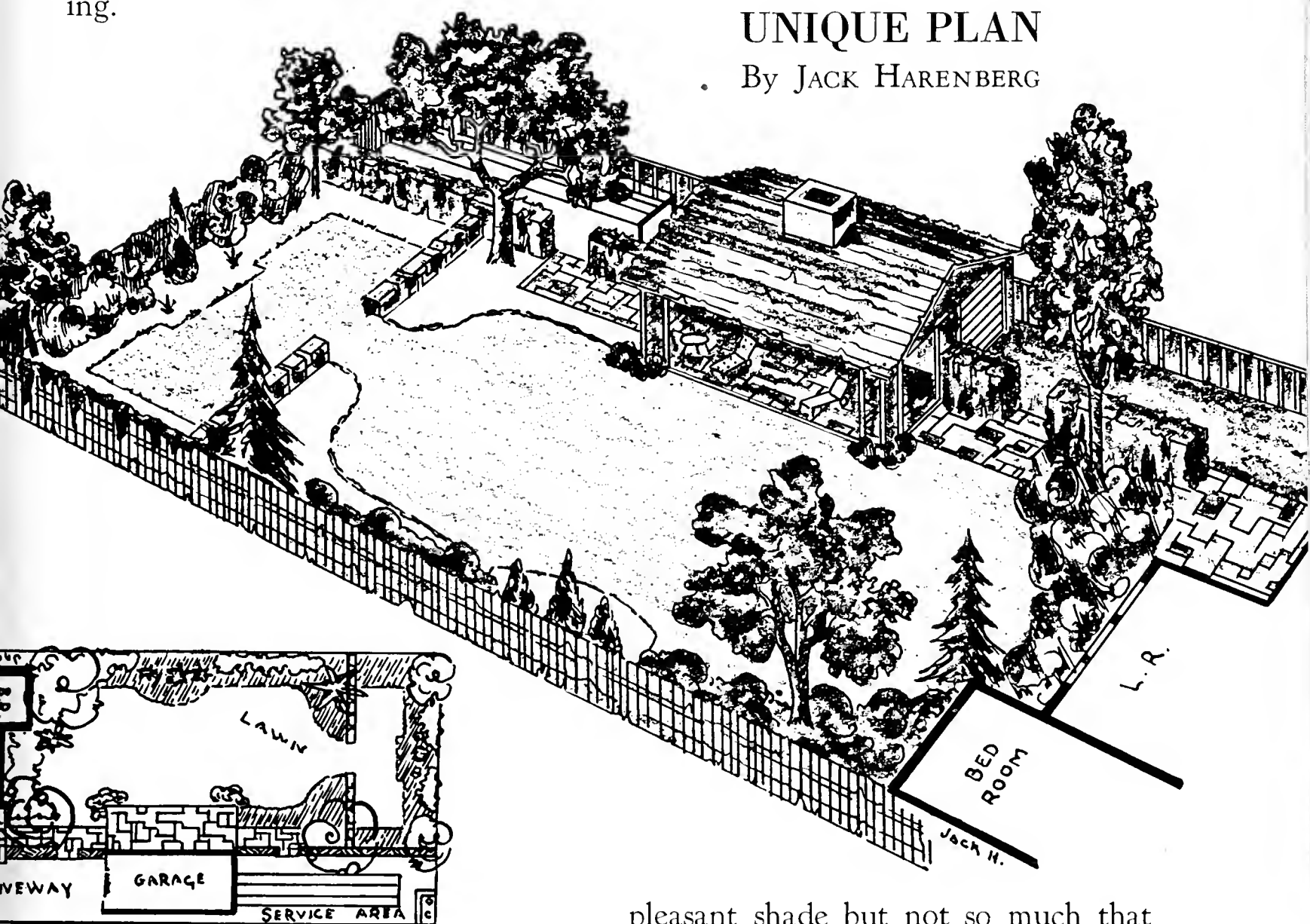
door. In the flower box a choice of low growing annuals may be used to give color throughout the summer.

The Pfizer Juniper to the left is used to frame the prominent chimney and flower box. This is backed up with a solid planting of Cotoneaster which softens the lines of the building.

The Honey Locust tree is considered a partial shade tree and is used here to frame the left side of our picture. The entire planting is developed to increase the beauty of the home.

## UNIQUE PLAN

By JACK HARENBERG



This sketch and plan for a small garden was made by Jack Harenberg to show how a small area may be made to appear larger and be both useful and beautiful.

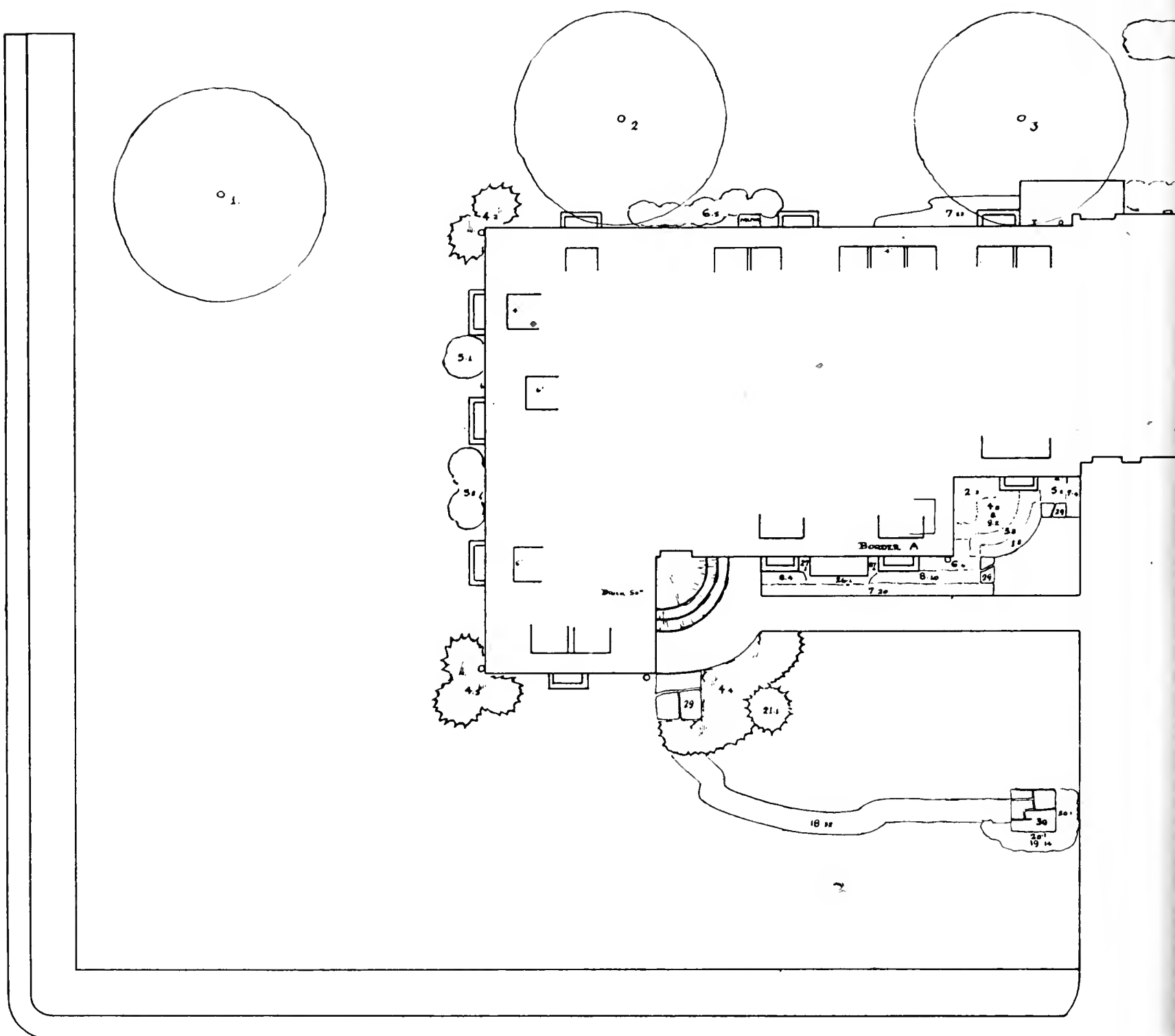
The lines are simple but well proportioned so that there will be pleasing views even in winter. The small secluded area at the rear increases the apparent size and gives an opportunity to vary the planting of borders. The trees are well located and selected for character so that there will be

pleasant shade but not so much that lawn or flowers will not grow.

The outstanding feature of this plan is the way that the garage is constructed to look like a summer house only. The use of hedges, fences, walls and flagstone paving gives the necessary useful appearance and yet gives attractive lines.

The necessary service features are tucked away in the corner where they do not detract from the main features, and still are convenient.

Any good local nurseryman can select plants which will give the effects that are here pictured.



# COMPLETE PLANTING PLAN

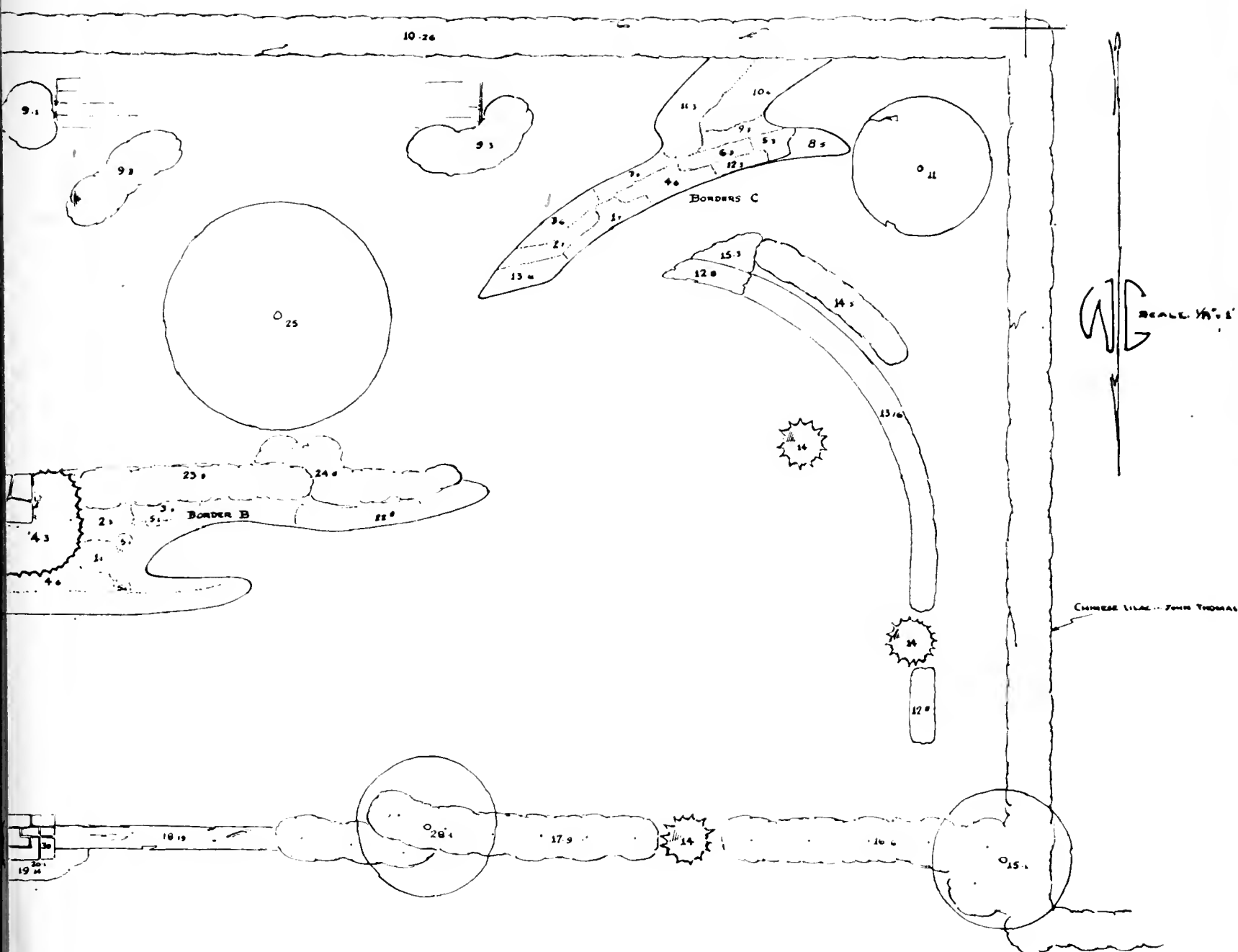
By R. U. WILLIAMS

Many good ideas can be taken from this detailed planting plan by Ray Williams of Greeley. The general idea is simple, with plenty of space for planting attractive borders. The finished garden will be enclosed for greater privacy. The trees are located where needed only. Study the material lists for suggestions for appropriate plants for various locations.

Especially valuable are the detailed lists of perennials for each border.

Planting Key to Mr. and Mrs. Charles O. Woods Grounds:

Key	Number to use
1. Ohio Buckeye, <i>Aesculus glabra</i> .....	1
2. Bechtel, hv. Prairie Crabapple, <i>Malus ioensis</i> .....	1
3. Hopa Crabapple, <i>Malus species</i> .....	1
4. Pfitzer, hv. Pyramid Chinese Juniper, <i>Juniperus chinensis</i> .....	3, 4, 3, 2
5. Smooth Hydrangea, <i>Hydrangea arborescens</i> .....	2, 1
6. Bush Cinquefoil, <i>Potentilla fruticosa</i> .....	5
7. Iris, hv. Iris .....	22



8. Froebel, hv. Bumalda Spirea, *Spiraea bumalda* ..... 7
9. Snowgarland Spirea, *Spiraea multiflora* ..... 1, 3, 3
10. Vanhoutte Spirea, *Spiraea vanhouttei* ..... 26
11. Newport, hv. Blireiana Plum, *Prunus blireiana* ..... 1
12. Chamaedrys Germander, *Teucrium chamaedrys*—2 row ..... 8, 8
13. Else Poulsen, hv. Rose, *Rosa* ..... 16
14. Juniper, hv. *Juniperus* ..... 3
15. European Birdcherry, *Prunus padus* ..... 1
16. Manchu Cherry, *Prunus tomentosa* ..... 6
17. Dwarf, hv. Common Ninebark, *Physocarpus opulifolius* ..... 9
18. European Privet, *Ligustrum vulgare* ..... 13, 19

19. Snow-in-Summer, *Cerastium tomentosum* ..... 14, 14
- with
- Narcissus, hv. *Narcissus* ..... 12, 12
20. Baltic, hv. Japanese Creeper, *Parthenocissus tricuspidata* ..... 2
21. Pyramidal, hv. Eastern Arborvitae, *Thuja occidentalis* ..... 1
22. Hybrid Tea, hv. Rose, *Rosa* ..... 11, 8
23. Eastern Wahoo, *Euonymus atropurpureus* ..... 5
24. Dwarf, hv. Winged Euonymus, *Euonymus alatus* ..... 6
25. American Linden, *Tilia americana* ..... 1
26. Bigleaf Wintercreeper Euonymus, *Euonymus fortunei vegetus* ..... 1
27. Japanese Creeper, *Parthenocissus tricuspidata* ..... 4

*William*  
Aug. 1952

28. European Mountainash, Sorbus  
aucuparia ..... 1
29. Flagstone
30. Entrance Piers

**Perennial Border A**

1. Blue Plantainlily, Hosta  
caerulea ..... 8
2. Bleedingheart, Dicentra ..... 3
3. Primrose, Primula ..... 8
4. Fern Genera ..... 8
5. Japanese, hv. Balloonflower,  
Platycodon grandiflorum ..... 2
6. Columbine, hv. Aquilegia ..... 6
7. Common Periwinkle, Vinca  
minor ..... 20, 4
8. Seibold Stonecrop, Sedum  
sieboldi ..... 10, 4

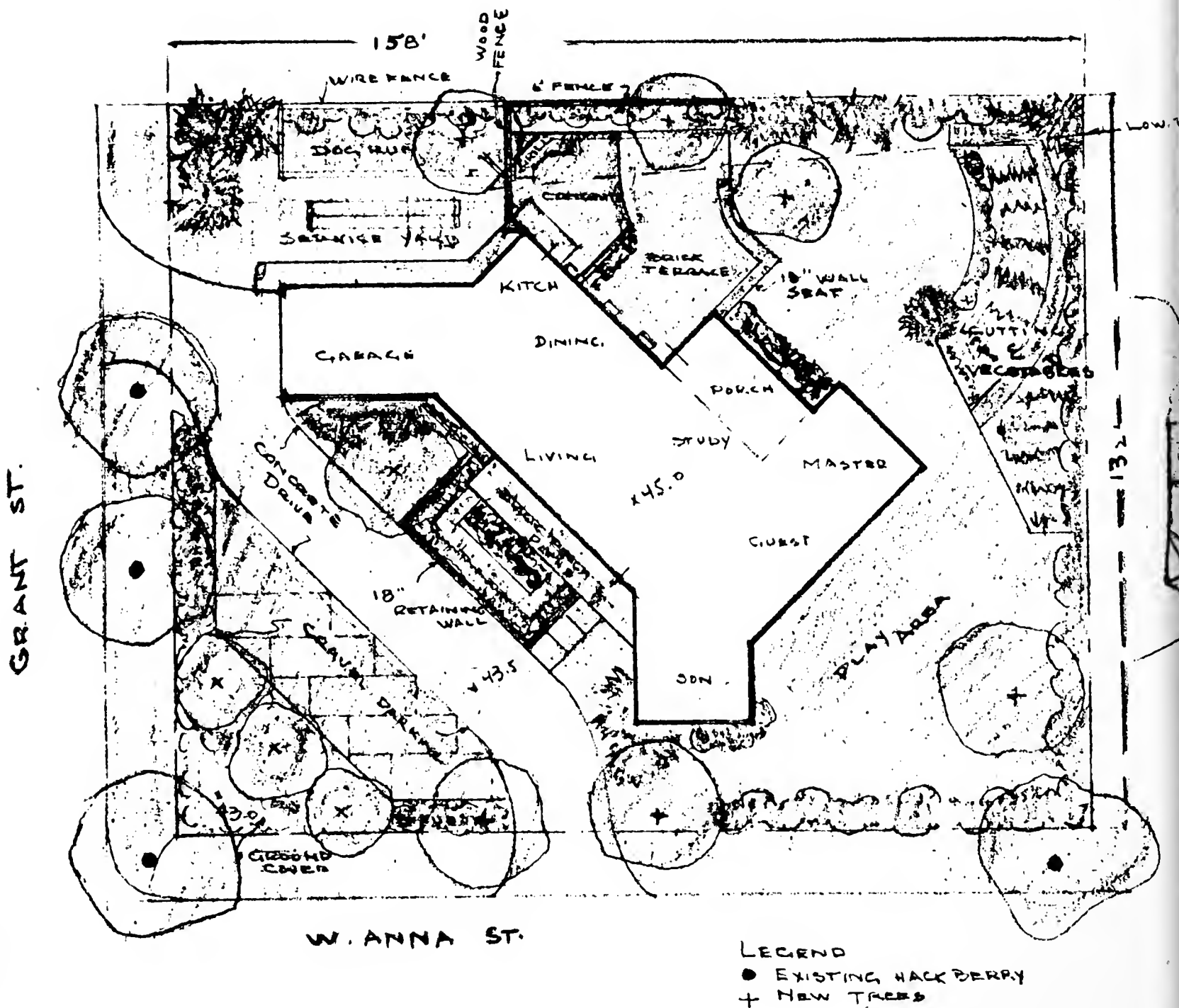
9. Virginia Bluebells, Mertensia  
virginica ..... 2

**Perennial Border B**

1. Bristolfairy, hv. Gypsophila ..... 1
2. Oneside Pentstemon, Pentstemon  
unilateralis ..... 3
3. Gayfeather, Liatris ..... 3
4. Blue Mist, hv. Bluebeard,  
Caryopteris ..... 6
5. Compactum, hv. Goldentuft aly-  
sum, Alyssum saxatile ..... 3

**Perennial Border C**

1. Carpathian Bellflower, Campanula  
carpatica ..... 7
2. Grenadin, hv. Carnation, Dianthus  
caryophyllus ..... 7



PRELIMINARY

**SKETCH PLAN OF LANDSCAPE DEVELOPMENT**

PROPERTY OF MR. &amp; MRS. A.J. LUEBS

GRAND ISLAND, NEBRASKA  
SCALE 1" = 25'

JULIA JANE SILVERSTEIN. LANDSCAPE ARCHITECT - DENVER

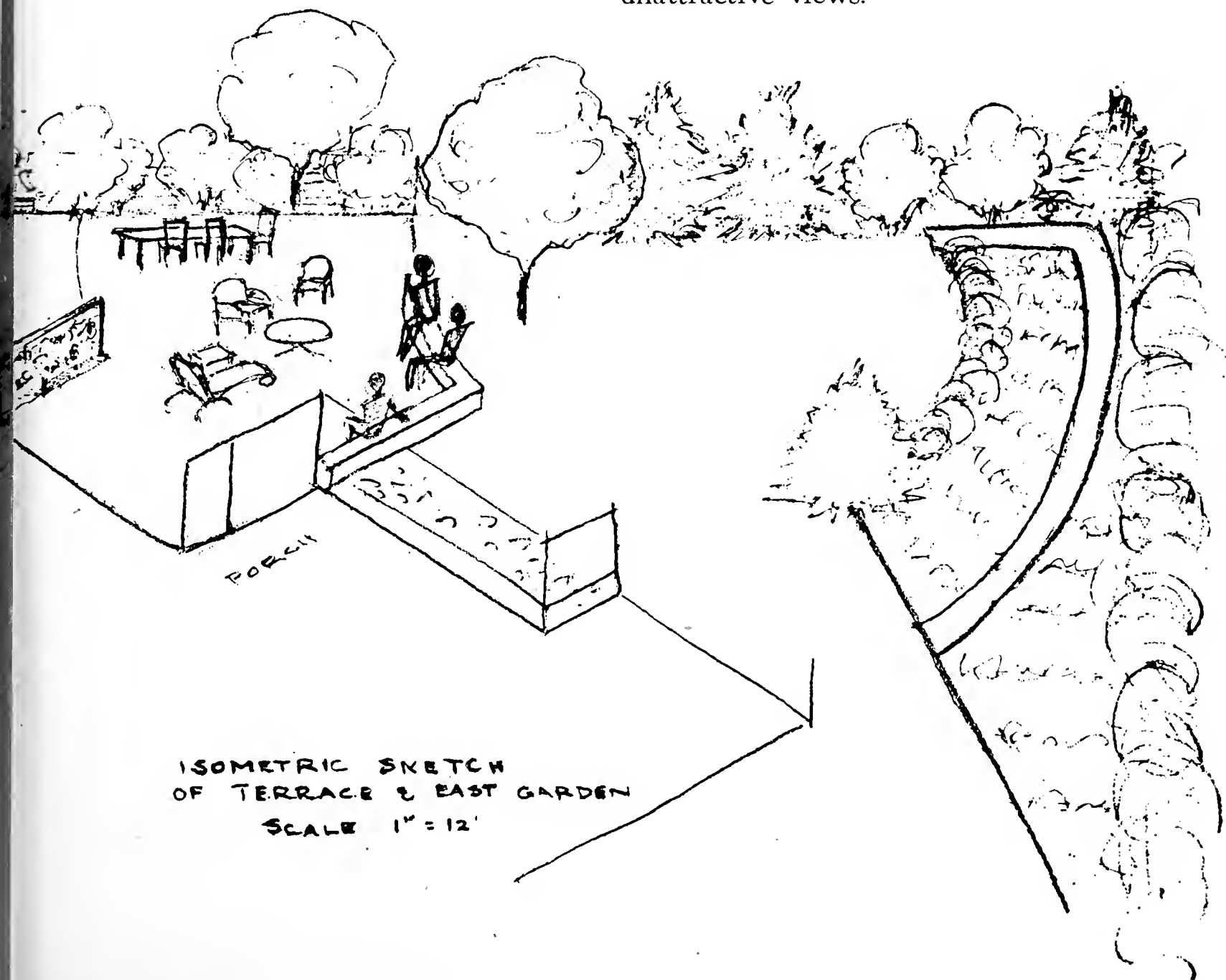
3. Chrysanthemum, hv. Chrysanthemum (own-pink, bronze, lavender) .....	6	9. Lance Coreopsis, Coreopsis lanceolata .....	3
4. Shasta Daisy, hv. Pyrenees Chrysanthemum, Chrysanthemum maximum .....	6	10. Larkspur, hv. Delphinium .....	6
5. Gaillardia, hv. Gaillardia .....	3	11. Butterflybush, hv. Orangeeye butterflybush, Buddlevia davidi.....	3
6. Oriental Poppy, hv. Papaver orientale .....	3	12. Vivid, hv. Virginia Lionsheart, Physostegia virginiana .....	3
7. Phlox, hv. Summer Phlox, Phlox paniculata .....	5	13. Woolly Speedwell, Veronica incana .....	11
8. Florists Pyrethum, Chrysanthemum coccineum .....	5	14. Peony, hv. Paeonia .....	5
		15. Torchlily, Kniphofia .....	3

## PLAN FOR LANDSCAPE DEVELOPMENT

By JULIA JANE SILVERSTEIN

This sketch and plan by Jane Silverstein shows a modern and attractive layout for a home grounds. The space is limited but the house is so located on the lot and the divisions of the grounds are so made that there is most space where needed and little waste. The whole gives an informal livable feeling.

Note that the service areas are so located that they are convenient but not conspicuous and the play areas are where they can be readily seen. Trees are used only where needed and are planned to each fill its particular place for size and shape. Screens of shrubs, hedge or fence are used to give privacy where needed or shut off unattractive views.



## MEETING THE FLOWER FAMILIES

By L. J. HOLLAND

VERY often the average gardener has a splendid specimen or group of a certain species, let us say Canterbury Bells, for instance, without being familiar with the family to which it belongs; often unaware of excellent material within the same genus. Obviously, this often results in the omission of some really fine material that would add spice and variety to the border, and in most cases lengthen the period of bloom, in as much as two species may bear a remarkable resemblance and yet blossom at quite different months of the year. An example of this is *Crocus versicolor* blooming in March, and *C. sativus* almost always at its best in October.

Hoping that at least some readers of Green Thumb will be interested in getting better acquainted with some of the lesser known members of the different families, I am presenting herewith the first of this series of articles. Their continuance will depend entirely upon you readers.

Since we must start somewhere, I think it would be a good idea to begin, as many textbooks of botany do, with the Buttercup Family (Ranunculaceae), and what better genus to lead off with than the one that is first alphabetically?

### ACONITUM (Monkshood)

This flower gets its common name from the hooded shape of the sepals of the large, showy flowers, usually of some shade of blue. It is well to note that Monkshood, like several other genera of this family, is poisonous in most or all of its parts. Small children should be watched when around them.

It is probably best to purchase plants from a nursery, but seed (which germinate slowly) may be sown out-

doors in May or started indoors a month earlier, and should bloom in August of the second year. If planted where they are to remain, they should be thinned to stand 18 inches to two feet apart; if grown in seed-beds, they are best transplanted in early September. Any good, rich loam, slightly on the acid side, will grow excellent specimens, but partial shade is absolutely essential, as the lower leaves will turn brown when grown in an exposed position, especially in this arid region.

The most important species of Monkshood are as follows:

*Aconitum napellus* (European Monkshood) is the best known and probably the most satisfactory species, characterized by large blue flowers with wide helmets and beak-like visors. Var. *album* has white flowers and var. *bicolor* has blue and white blossoms. 3 to 4 feet high.

*A. fischeri* has blue or white flowers and grows to six feet. Due to its slender stems it requires staking. Later than *A. napellus*.

*A. anthora* (Pyrenees Monkshood) is suitable to the rockery, as it seldom exceeds 18 inches in height. It has pale yellow flowers with a rounded helmet and a short beak. Var. *aureum* has flowers of a deeper yellow.

Of the five species found growing in Colorado, only two, *A. columbianum* and *A. bakeri*, are really worthy of a place in the home garden. Best give these two rather dense shade and a mulch of Pine or Spruce needles.

Since the Monkshoods are so closely related to the Delphiniums it should be no surprise to learn that they are susceptible to the same diseases and insect pests. If given ample spacing,



diseases are a minor problem; mildew and verticillium wilt being very uncommon in this locality; crown-rot, prevalent in the East, is seemingly unknown here. Aphids are the worst insect pest we have to contend with;

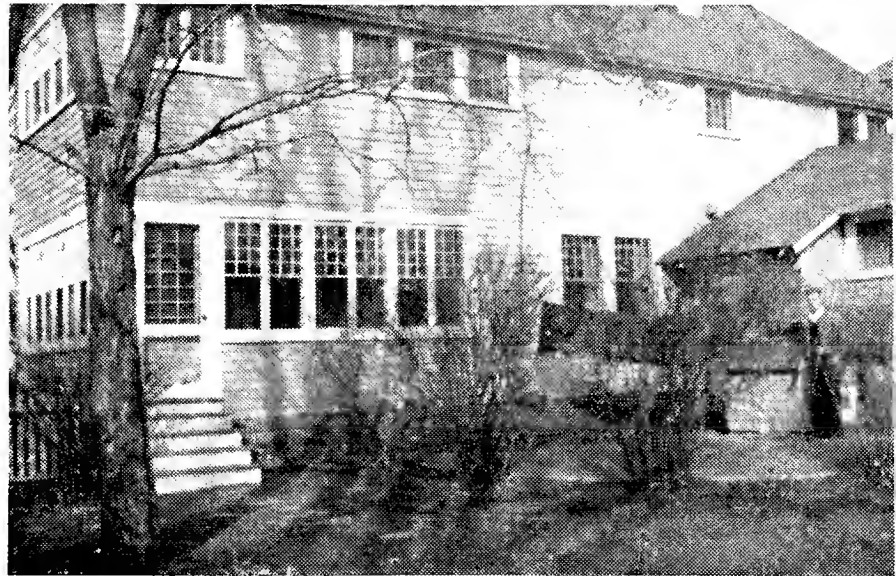
nicotine sulfate is still my favorite answer to them. Cyclamen-mites and red-spider are sometimes a nuisance, but are easily dealt with; a forcible spray of cold water usually being sufficient.

## WASTED NOOK MADE INTO USEFUL OUT-DOOR ROOM

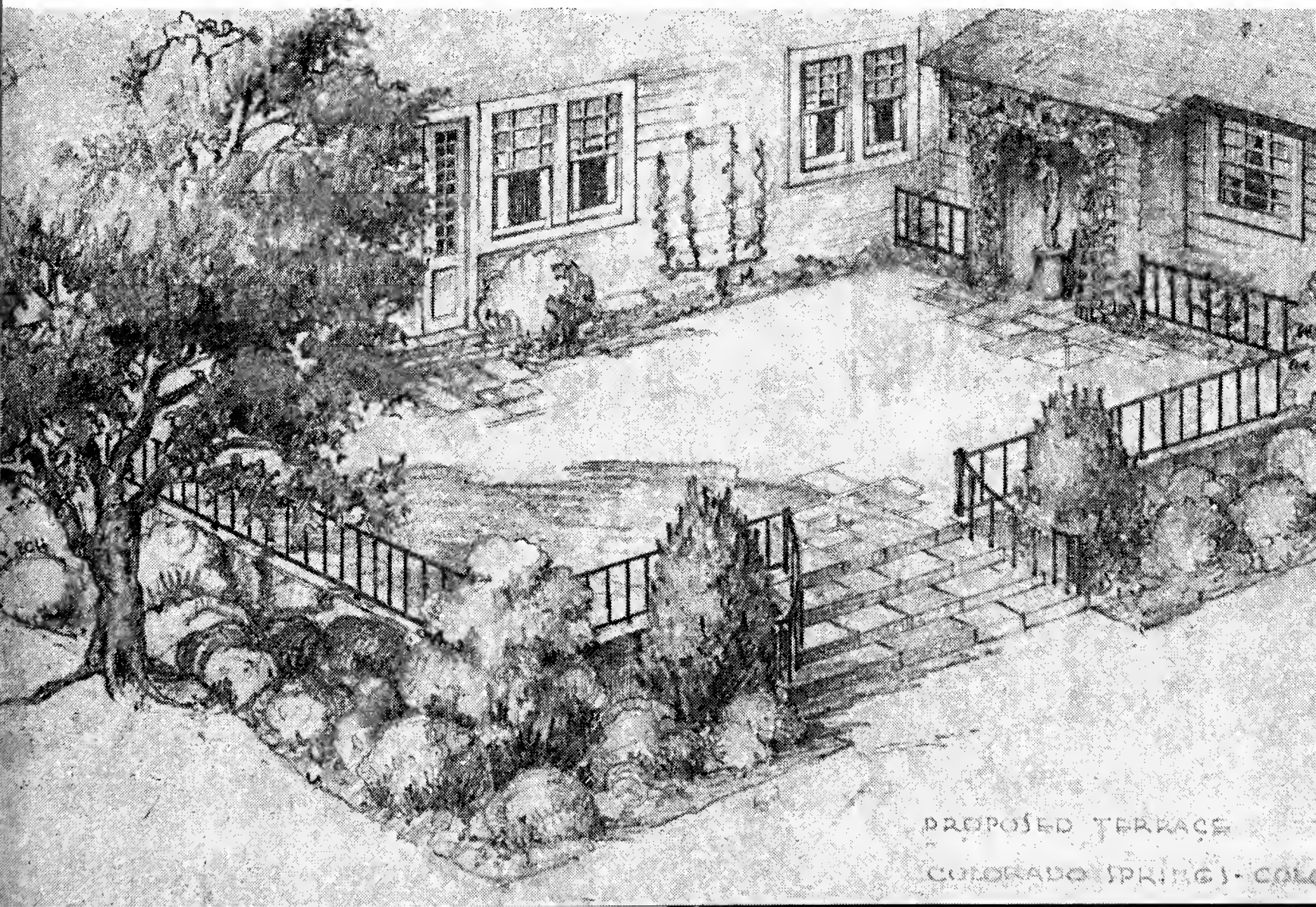
By MRS. G. R. MARRIAGE

This drawing shows a suggested development of a nook in the corner of a large building. Small photo shows the area before development. Plan by Mrs. G. R. Marriage of Colorado Springs, Colo.

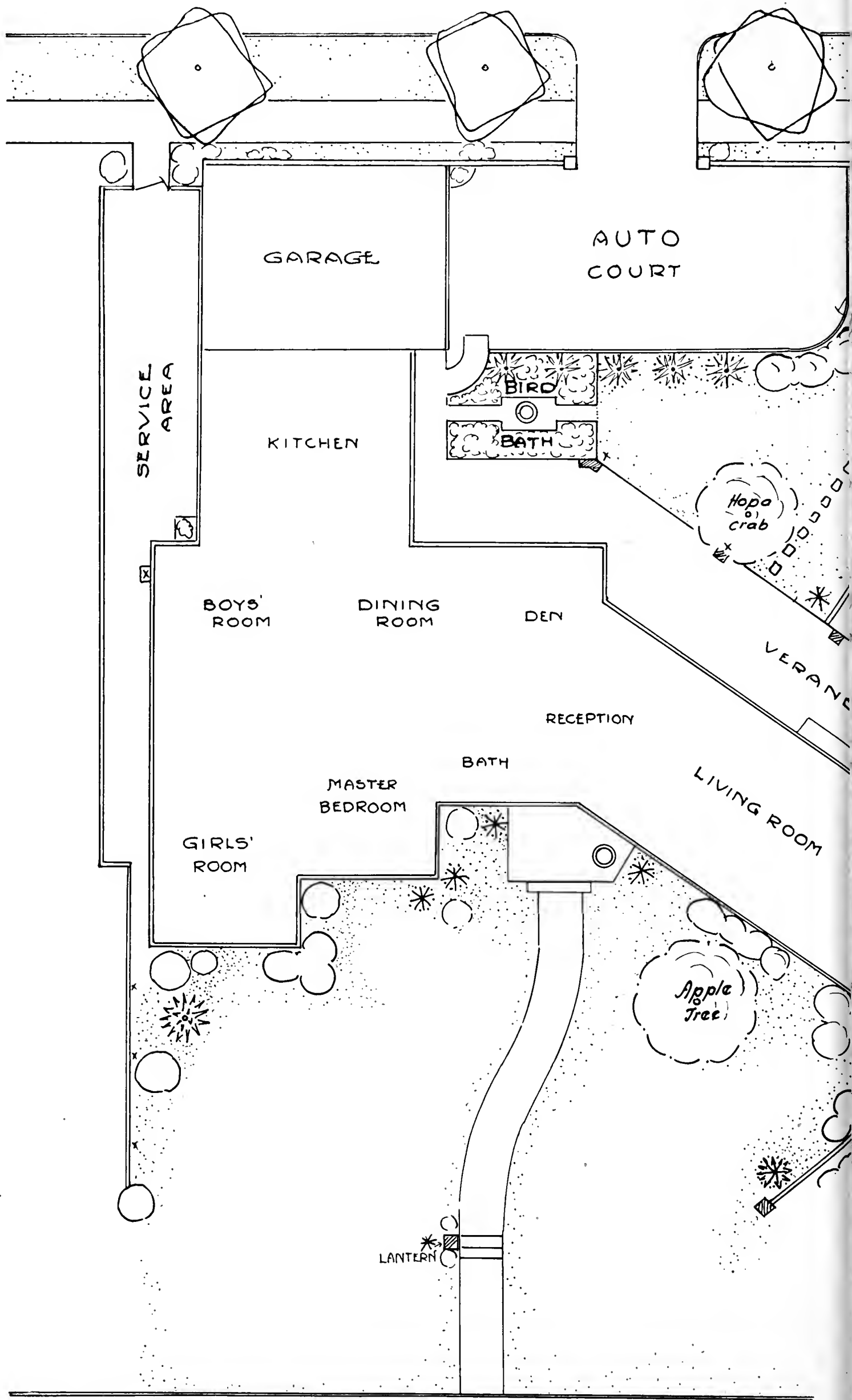
This plan will give a place to entertain, to sit and relax, and gives a pleasant approach to the house from the garden and also provides an entrance to the garden from the house.

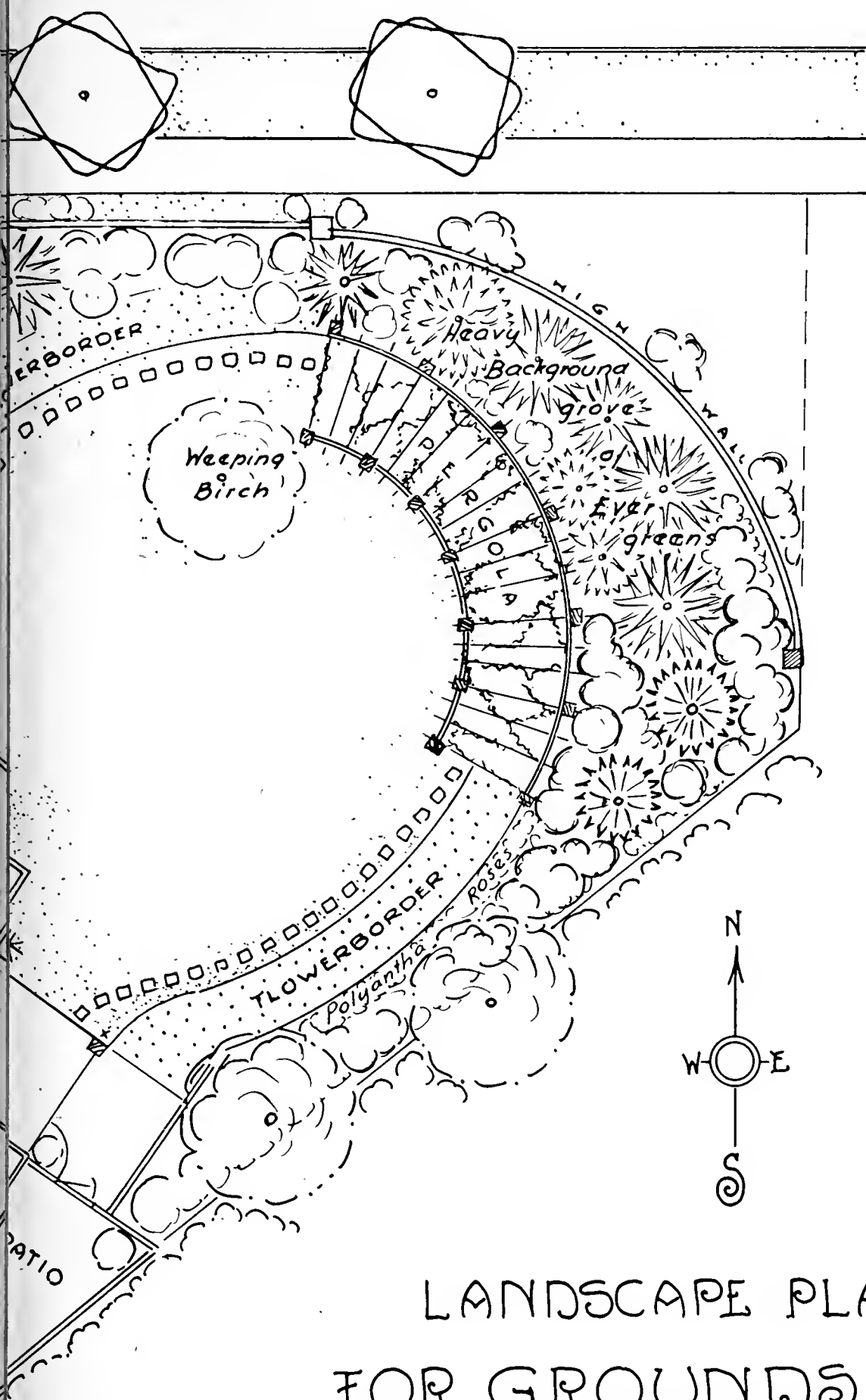


Flagstone, ironwork fences, steps, statuary and appropriate plants all combine to make an attractive garden nook.









LANDSCAPE PLAN  
FOR GROUNDS OF

MR. & MRS. DONALD MARSHALL

540 CIRCLE DRIVE

DENVER, COLORADO

M. WALTER PESMAN - LANDSCAPE ARCHITECT

0 4 8 12 20 30 40 60 80 ft.

Scale in feet

## HOW ONE MAN'S GARDEN WAS MADE

*Donald Marshall Did Most of the Construction Himself*

By M. WALTER PESMAN

**W**ONDER what's behind that striking wall? It intrigues me! The question was overheard a number of times at Sixth and York where the Marshall home grounds were developed day by day. The initiated visitor became even more intrigued as he stepped behind the wall and found a good-sized auto court between garden and home, to take care of the owner's car and that of his visitor.

Another gateway and, all of a sudden, you forget all about the busy traffic on Sixth Avenue: you are in a quiet intimate garden, that fits the quiet, intimate ranch house. And you find, not an ostentatious layout but a medium-sized garden—one that the average home-owner can afford and that he dreams about.

What is more, it is a layout that fits the owners, Mr. and Mrs. Donald Marshall, who claim no other title than "rancher from Nebraska." No, not even "rancher," but "farmer"

(that is less ostentatious and more correct).

It all started in 1950 when a plot was selected, facing on both Sixth Avenue and Circle Drive, a plot that looked odd, to say the least, unpromising to most. But—as is often the case—the very handicap became the secret of success, and the whole layout is now one that fits the surrounding, fits the ground, fits the owner. After it is all done it seems the most logical thing to do.

Building and ground were designed at the same time; the location on the plot was carefully studied, and a rough plan evolved as a result. Then, as the work of building continued, these plans were carried out with very few changes—minor changes at that.

The high wall along Sixth Avenue, curving south at York, so as to do away with any traffic hazard at this busy thoroughfare, was a necessity. It also became the "making" of the

*The stage is set with the brick wall as a backdrop, and the little water boy in place to start pouring water in the pool.*





*The curved pergola has a substantial yet airy character in harmony with the ranch house.*

garden. Sure enough, the property sacrificed outside the curve seemed wasteful; on the other hand, the shape of the inside made up for this waste: it was an unusual form, that in turn, called for an intimate outdoor living room.

Thus grew the summerhouse, or pergola, or grape arbor, whatever you want to call it. Its curve follows that of the wall in general. Behind it the ground was naturally higher and a group of evergreens planted there added to the seclusion and helped to hide the traffic lights, flickering day and night.

Since the comfortable veranda is on the north side of the home (you would expect a good-sized porch with a ranch-house, wouldn't you?) the garden has southern exposure and shows up in full glory as you sit on the porch.

To a dexterous person like Mr. Marshall the pergola was no problem: it was built out of the same two-by-fours, used for the house, doubled to give a solid effect, yet avoiding heaviness. A seat in the rear of the pergola evolved naturally since the ground

was higher there anyway. It was made out of a retaining wall of brick, topped by a redwood seat. Just the right height to sit on. The curve of the pergola fits that of the wall and gives an intimacy to the garden, as if it invited you to follow the stepping stones leading to the pergola. Grapes on top? Naturally!

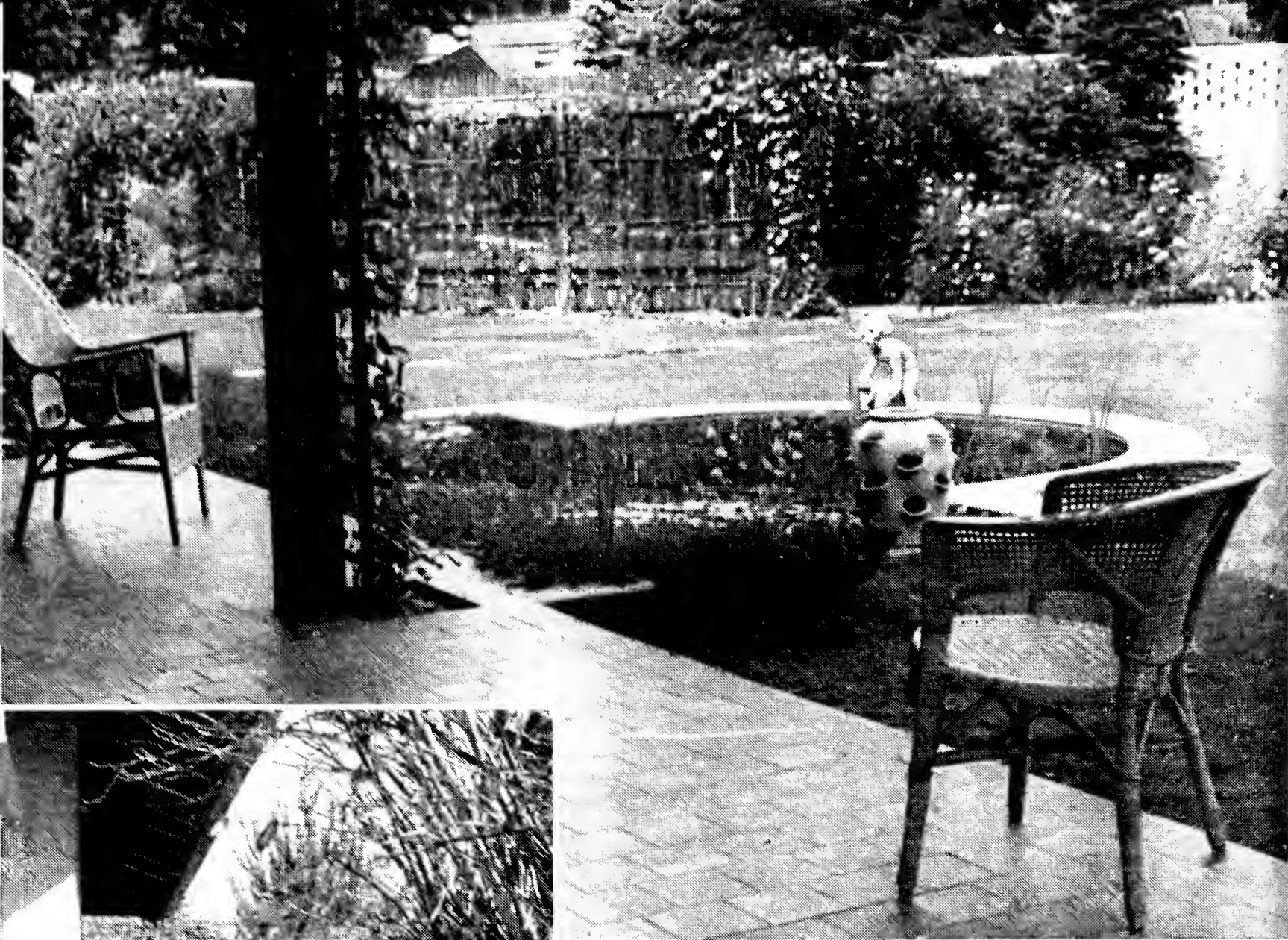
Again, flower borders along the north and east side seemed to "just grow" out of the plan—the most natural way. (See the plan.)

The "front" of the house is facing Circle Drive. It is unostentatious like the rest—and quiet. Even when the tulips will give it added "zip" next spring, they have been kept in the yellows and bronzes.

An interesting nook that developed out of the unusual plan and the unusual shape of the plot, is the little triangular patio to the east, walled in by a less high wall, and paved in harmony with the veranda. One of the pictures shows the first view one gets of garden and pergola coming from the front through this little patio.

Another odd "left-over" is the Service Area to the west, just large





*The final result is a home-like garden that has intimacy and charm.*

enough for clotheslines and odds and ends, but not dreary due to a few vines that have stolen in at the corners.

The pictures show how the work progressed during 1950 and how even one year of growth has given a home-like touch. The plan indicates location of bird-bath in front of kitchen windows and also points out how pool and fountain give added interest to the close-in picture as seen from the veranda. Again, Mr. Marshall himself the builder. (The "water-boy" was shipped in from the East.)

Plant material? White weeping Birch and Hopa Crab are specimen trees very carefully plotted so as not to interfere with main views. The Apple tree in front fits in with the ranch-house idea and, incidentally, helps to provide intimacy for the living room, which has windows on both north and south sides.

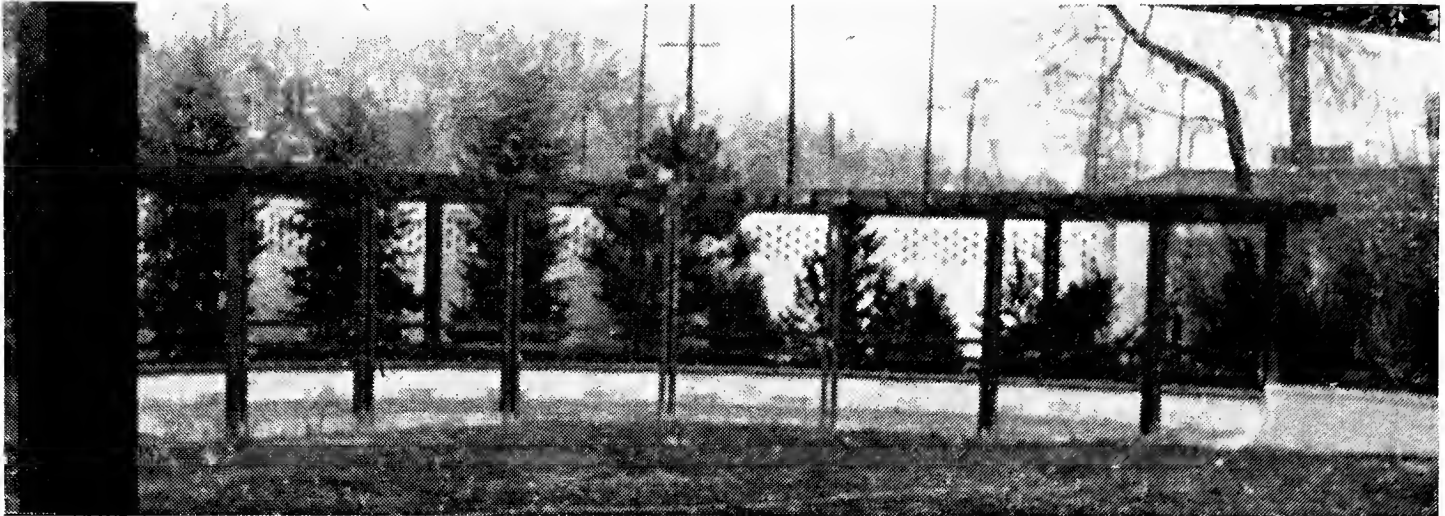
So that is all that's behind the garden wall: just a home-like garden,



*Turning around the front corner of the house you get the first glimpse of the private garden through a small walled-in patio east of the building.*

that carries out the character of its owners, that has intimacy and charm, and that impresses one as an intrinsic part of the home itself. It is not an expensive "home-ground," just a sample of what can be done with an imaginative mind, a definite plan to

begin with and the desire to create the outdoor living room in harmony with the gracious atmosphere of the inside of the home. That, incidentally, gives a hint about the other mind behind it all, the lady of the house. But that story deserves a separate article.



*Good sized evergreens between wall and grape arbor add to the seclusion and help to hide the traffic lights.*

## STICK TO YOUR GUNS, SECRETARY

Extracts from a letter written by George W. Kelly to Secretary of Interior Oscar Chapman, December 11, 1951.

**T**HE Denver Post last night had another story about the pressure that was being brought on you by those who want to build dams in the Dinosaur National Monument.

I just want to encourage you a little to stick by your guns. You know what the right thing is to do, if you do not let the big noise influence you.

I have spent a lot of time trying to get the facts in this case and these are my conclusions. You can easily verify these things.

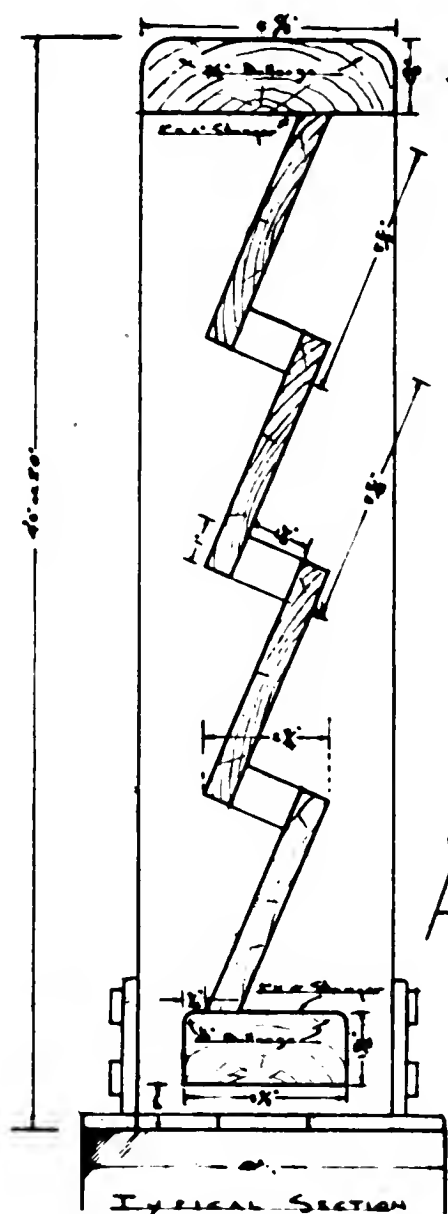
1. Flooding the canyons of the Dinosaur Monument WILL destroy its most valuable asset—its scenic and recreational value. It is plain silly to think otherwise.

2. It is NOT necessary to build dams in this monument. There are plenty of alternate sites which will give the desired benefits of power and water storage. No one has proven that this is not true. We can have

our cake and eat it, too, if we are wise.

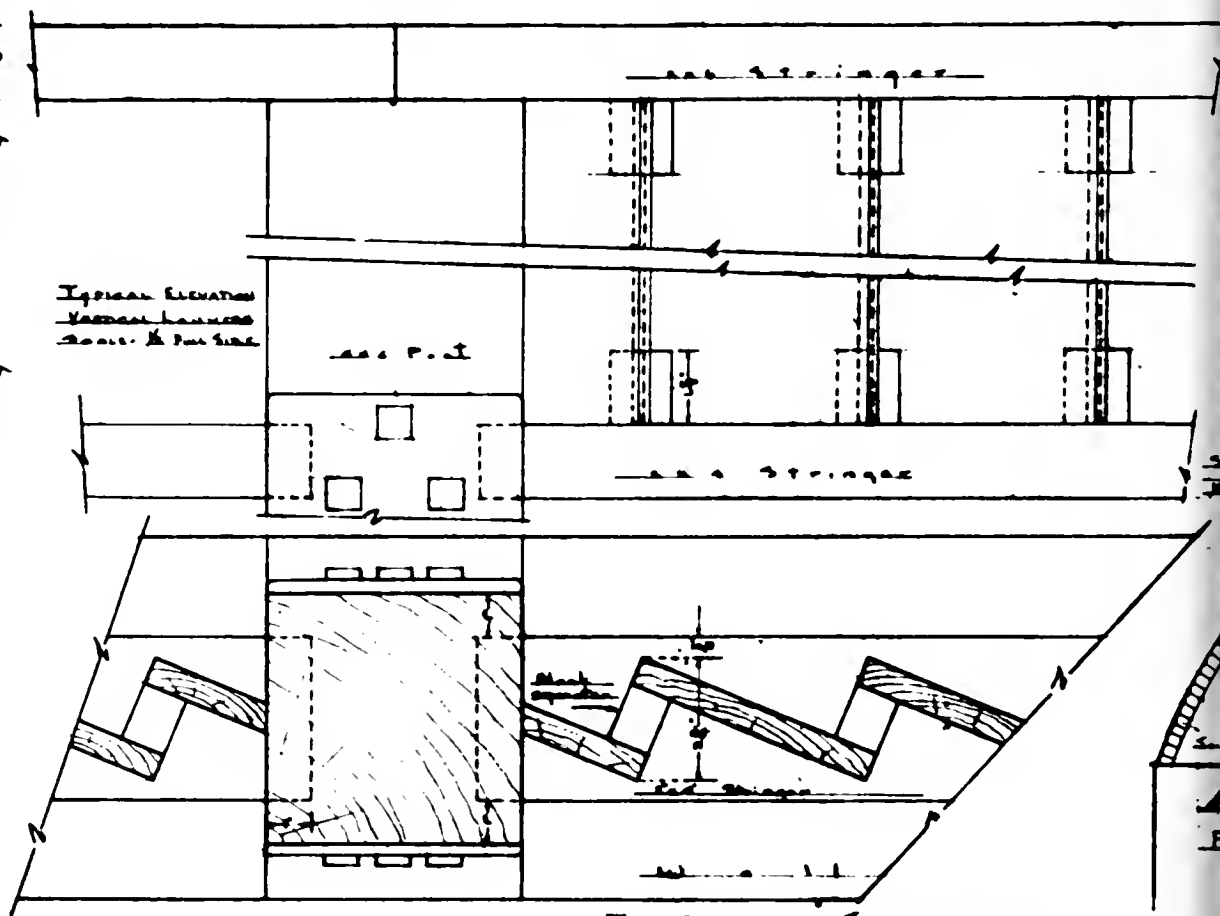
3. There are 10,000 people in these United States who do NOT want dams in this monument to everyone who does; BUT, the few who do want them, can (like coyotes) sound like a multitude; and if one is not wise to them it is easy to assume that they represent the people of the United States. I have yet to find one of those who are hollering for these dams who has not some personal gain to make by their erection. (Or have been sold by the slick propaganda of those who have.)

4. Those in these United States who feel that we are not so hard up yet that we need to destroy such irreplaceable assets as the canyons of the Dinosaur are not the hollering kind; but let us get stepped on hard enough and we will holler—and plenty.

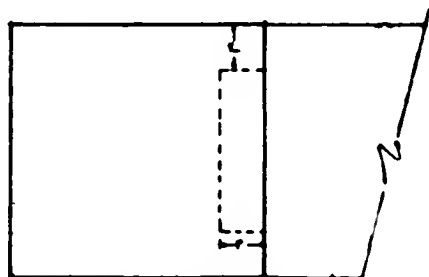


Typical Section  
Horizontal Louvers  
Scale: 1/4" = 1'-0"

See other detail for horizontal louvered transoms

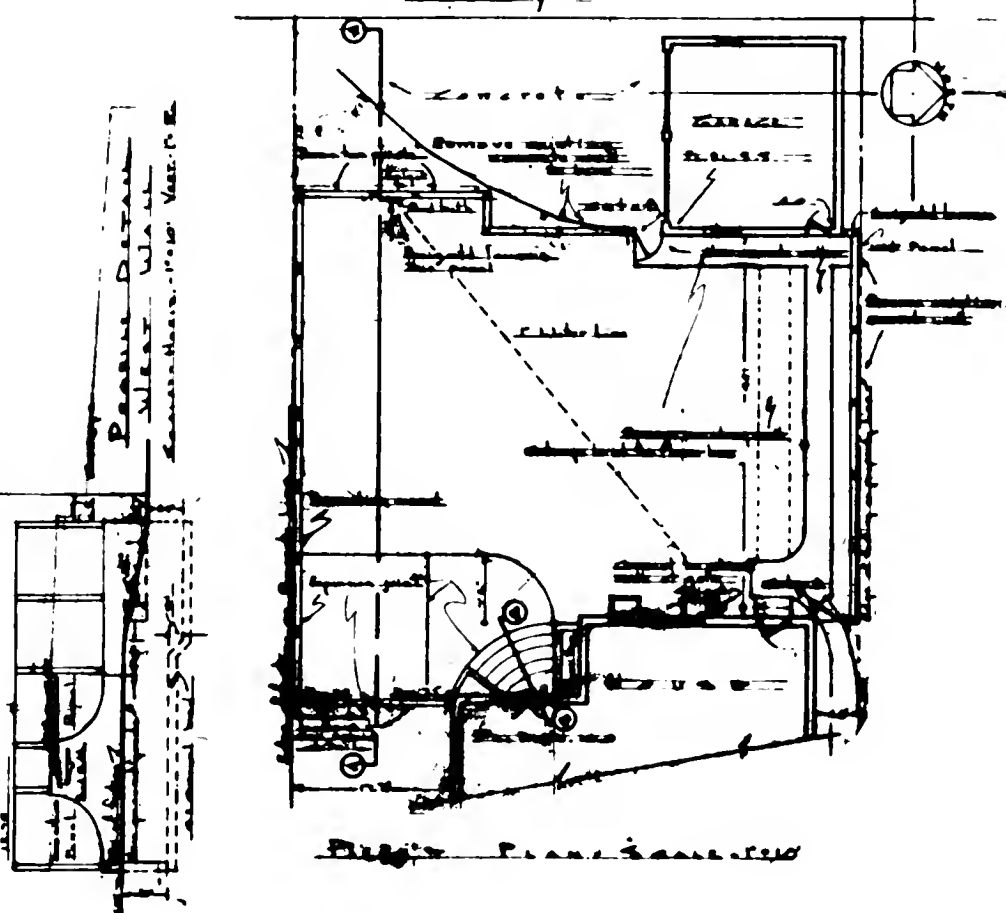
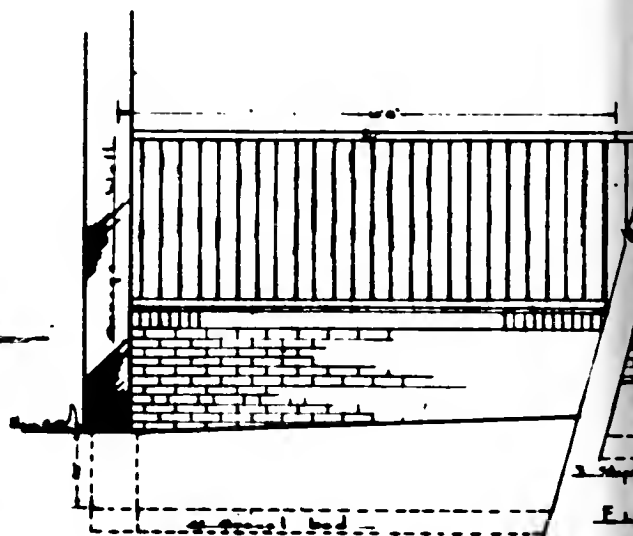


Typical Elevation  
Vertical Louvers  
Scale: 1/4" = 1'-0"

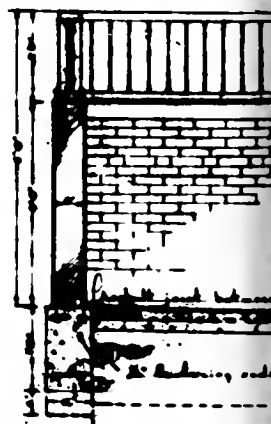


Detail A  
Scale: 1/4" = 1'-0"

Typical Section  
Vertical Louvers  
Scale: 1/4" = 1'-0"



Plan View of Louver Assembly







# DETAILED PLAN FOR THE

By SAM HUDDLESTON

"HOW," other than being a three letter word generously accepted by our re-  
brothers, is a word that the Landscape Architect's dictionary might define as on-  
limited to the thoughts of those who turn a client's wishes and dreams (nightmare



## CLIENT'S WISHES AND REQUIREMENTS:

Feeling of simplicity and relaxation,  
no jittery or "moderne" effects, the  
finished garden to be in harmony with  
the residence.

## EXISTING CONDITIONS:

House—good Georgian architecture  
French doors to yard from living  
room, extreme south side; service door  
from kitchen, extreme north side  
floor level 5' above low point in yard



Large terrace for entertaining.

Terrace — flagstone, turf joints — un-  
comfortably rough in furniture; only  
large enough for two chairs; awk-  
ward, dangerous step down from liv-  
ing room. Location off living room  
good.



Privacy without creating features ob-  
jectionable to the neighbors.

Yard—very small, 65' wide; averag-  
ing 45' deep with about 3½' pitch  
across depth.

Maximum lawn area and sun.

Driveway—curved, parallel, using up  
large portion of yard.



Sufficient flowers for bloom continu-  
ity throughout the growing season.

Plant Materials — 7 spruce (3 very  
large), 1 10" apple, 1 10" Russian  
Olive, 40 assorted shrubs, a small  
forest all told.

Maintenance to come within the lim-  
itations of a three hour weekly, neigh-  
borhood yard man.



Small space for cut flowers.

Brick Service Walk—overgrown with  
grass, located so as to waste large part  
of yard.

# DEVELOPMENT OF GROUNDS

*(Explanation of Plan on Preceding Pages)*

and otherwise) into wonderful reality within budget limitations. Applied to the job at 135 Franklin Street, Denver, depicted by the construction plan in the preceding pages, "HOW" progressed to reality under requirements and conditions about as follows:



## SOLUTION:

Brick flower boxes flanking steps to terrace, to protect roots of existing, fine Wintergreen Creeper on house and to soften hardboiled effect of bare walls surrounding terrace. Brick portion of fence same as brick in house to secure cohesion of house and garden. Pitch of ground across garden eliminated by raising the west end, using soil excavated in building wall and terrace, to secure a level appearance. Main drop in grade to driveway level for drainage hidden under shrub border near garage corner.



6' x 23' concrete terrace to fit between wing of house and south property line, designed to secure maximum open space in garden in preference to projecting terrace into expanse of lawn. Concrete stained antique green for softer, blending effect. Shade secured by awning over terrace. West fence offset opposite terrace to create informal axis. Lead birth bath mounted in center of offset with water spray from lead frog, mounted on projecting flagstone for fountain effect. Large Bechtel Crab in corner of drive behind wall to overhang the feature and screen rear of houses and garages across the alley. Louvered boards in fence placed horizontal in panel above the feature to secure good composition and change of line to draw attention to the feature.



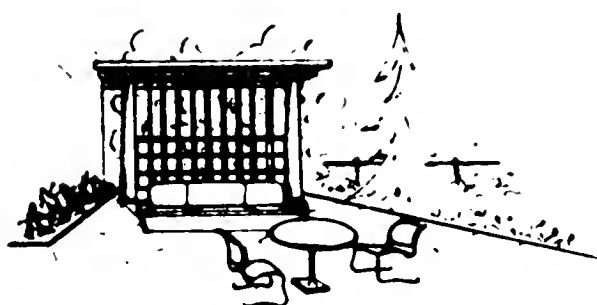
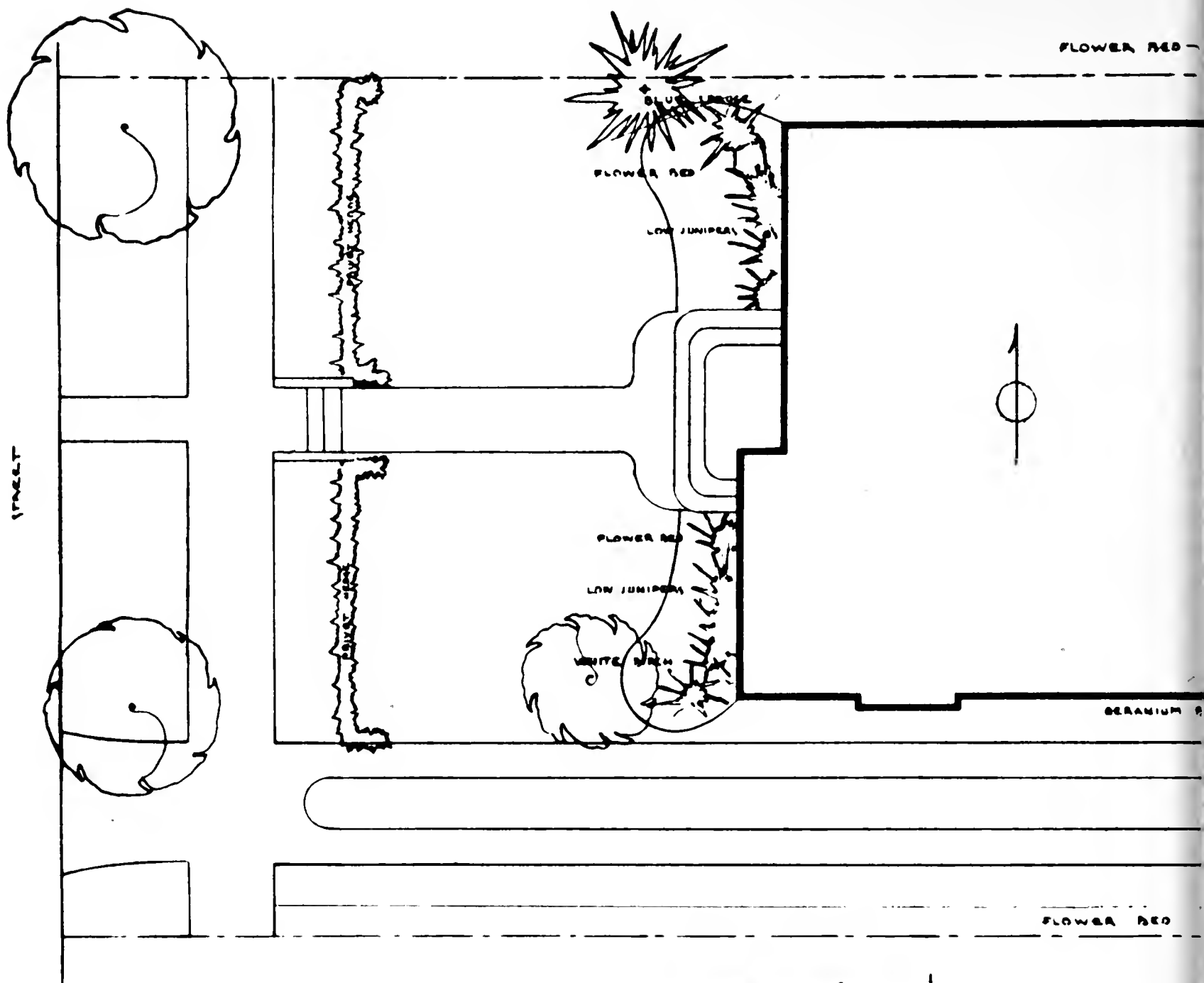
Fence for maximum of privacy, minimum maintenance and greater saving in space rather than clipped hedge or shrub screen. Of center type construction resulting in same appearance outside as in for neighbors' benefit, louvered boards used vertically for maximum light and air, angled south-east to north-west on south side, north-east to south-west on north side so neighbors could see in but not toward terrace; all wood on fence stained natural moss green to blend with trees in surrounding yards in the background to get maximum feeling of spaciousness.



All plant materials traded off except one specimen blue spruce with weeping habit. Replaced with dwarf evergreens, 2 crabs, 2 junipers, Antony Waterer Spirea, 2 Pinyon Pines largely grouped to screen out the garage; from a composition centering on the spruce; round out the lawn on the north end and hide several window wells on the west house wall. Paul Scarlet Rose, yellow Clematis and Bittersweet were planted on the fence with perennials on the south side extending along and out from the west wall sufficient to form a shallow bay at the axis end.



Service walk replaced in concrete, stained same green as terrace, moved north to get maximum grass area. Brick in walk salvaged and used in wall. Cut flowers planted in space between walk and north wall.

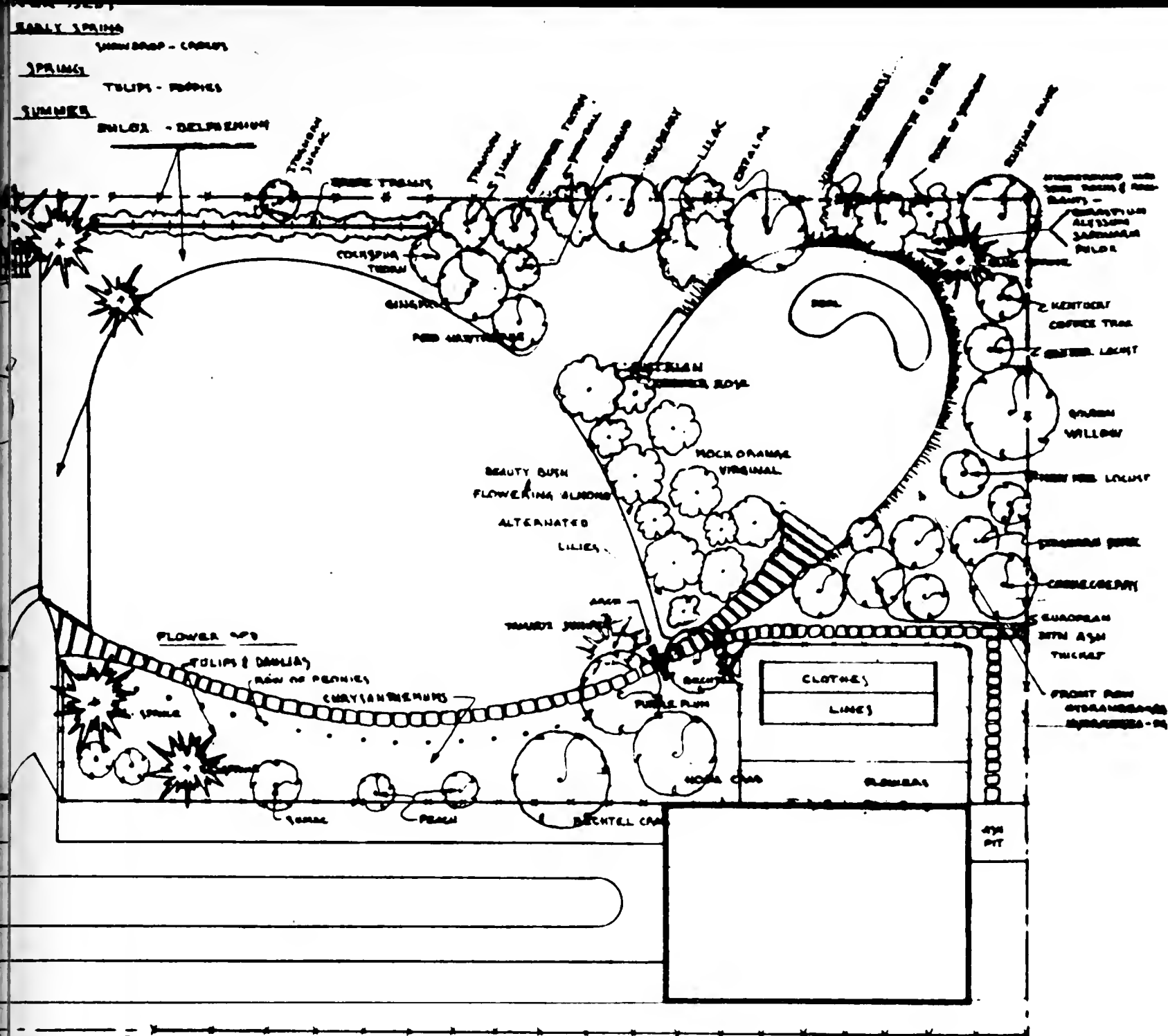


## A PRACTICAL PLAN FOR A SMALL GARDEN

By S. R. DEBOER

An attractive garden does not need to be large. The plan of Mr. and Mrs. Howard Wharton, 364 S. Vine, illustrates that modern lines of design are possible on a 50 by 125 foot lot. The back yard contains a sitting terrace with swing or couch in front of a simple pergola structure. The latter and the planting behind it are used to screen the terrace from the neighboring property.

There are two little compartments in this garden. The one nearest the house follows curving lines and is the main body of the garden. It contains flower plantings with early snowdrops and crocus and continuing with tulips and poppies. It contains summer flowers such as peonies, phlox, delphinium, etc. Then there are flowers for autumn, and spruce and other trees for winter effect.



# MR. & MRS. HOWARD WHARTON

364 30 VINE

SCALE 1/4" = 1'-0"

DRAWN BY RGA

The second room of this garden was designed especially for privacy. Mrs. Wharton is fond of writing and likes to do that in a secluded nook of the garden. To accomplish this the ground was graded lower here, which in itself makes it secluded. The planting on all sides is heavy and contains shrubs and trees of various types. One effect is created by a Hopa crab and another by a Bechtel flowering apple. There is one Golden Willow which towers above the other planting.

Utility rooms for clotheslines and ashpits are placed against the north

side of the garage. The entrance to the secluded back room is under a little arch on which purple clematis and other vines are trailing. A grape trellis makes a separation on the north side of the main garden. This is an easy way to make a border planting. Phlox and delphinium are in front of the grapes.

The front yard is very simple with a low hedge of privet and a planting of flowers in front of a few junipers. One corner of the house is set off by white birch and the other by a blue spruce.

S. R. DE BOER.

## SEEDS FOR DEMOCRACY

*You Can Help the Filipino by Sending Seeds!*

ONE of the greatest stumbling blocks in the path of full democracy in the Philippines is that created by inadequate food production which results, in part, from the lack of vegetable seeds and, in part, from the unemployment during much of the year of a large percentage of Filipino family members.

The Committee for a Free Asia, Inc., has undertaken a campaign which offers the American people a sound, practical method of fighting communism with a weapon basic to all human needs—food. This campaign—SEEDS FOR DEMOCRACY—asks Americans to contribute vegetable seeds (which may be sent to 596 Clay Street, San Francisco, California) which will be packaged and shipped to the Philippine Islands. Launched last year, as an experiment, 162,693 packages of seed were received and distributed. An even larger number of packages are sought this year. The greatest need is for *green string beans, Chinese cabbage, mustard, green pepper, collards, egg plant* and similar typical American vegetables with which the ordinary Filipino family is familiar. Now is the best time to send these seeds to the Philippines. The best growing season there extends from October through January. Contributions sent now will make it possible for children to plant school gardens in time for the vegetables to be ready to eat before the schools close for vacation during the hot spring season next

year. The Philippine Food Production Campaign will distribute the seeds throughout the islands and American agricultural scientists working there as advisors will help supervise use of the seeds. The SEEDS FOR DEMOCRACY drive can become a symbol to the Filipino people of American interest in reconstruction of their republic. The drive deserves the support of all.

Each package of seed shipped to the Philippines will have attached a sticker containing the following text in both English and Tagalog, the official language of the Philippine Republic:

These vegetable seeds are offered to you, free, from the people of the United States who have formed the Committee for a Free Asia to help you in the speedy rebuilding and development of your great republic.

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## NOW IS THE TIME TO

**PLAN** for all the new things, or remodelling of your garden. This issue is largely given over to details of planning the garden. Learn all you can about suitable arrangement of the desirable parts of a garden, the best plants and materials to carry out the effects wanted and the best way to put these ideas down on paper, so that they can be carried out when the proper time comes.

**STUDY CATALOGS.** Send for those that might give you good ideas. Decide as soon as possible just what you need and get your order in soon. Do not be misled by the pretty pictures of firms in distant states. Possibly these things grow well here, but more than likely they will not. Consult your local nurseryman with years of experience in this country.

**STUDY** about Tuberous begonias, Euonymus, Oak trees, Floribunda roses, weed killers, fertilizers, grafting, rooting cuttings or seventy-seven other interesting things that will make gardening more fun. The more you know the more you will want to know.

**MAKE A SCRAPBOOK** of pictures of steps, fireplaces, front doors, fences, sundials, wall fountains or stepping stones. It will be fun collecting these things and you can select the best for your own garden.

**INSPECT BULBS** in storage to see that they are not too dry, too wet, too hot or too cold. Dahlias are especially particular. Tuberous begonias, Cannas and Glads will stand a check up once a month. Arrange to treat the glad bulbs for thrips before planting.

**INSPECT THE HOUSE PLANTS** for the first sign of insect pests or disease. An ounce of prevention here is surely worth a pound of cure. Learn to recognize the main classes of insects and know what sprays or dusts are most effective against them.

**PREVENT SNOW DAMAGE** by tying up, bracing or covering. Also see that tender things like young Linden, Mountainash, and White Pine are shaded. Avoid wind damage by erecting windbreaks to the northwest or brace top-heavy trees.

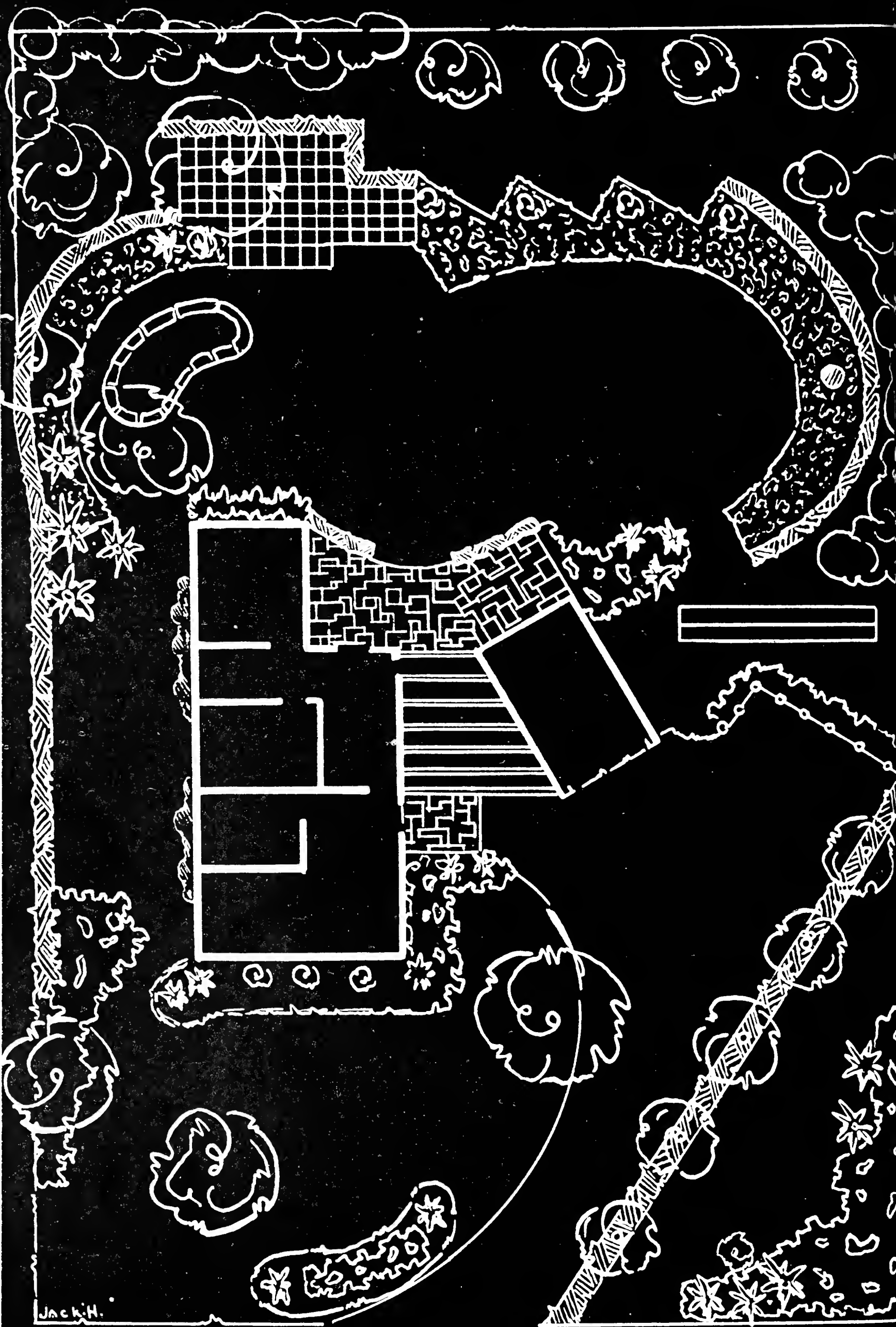
**PRUNE** grapes or take dead wood out of trees, shrubs and vines. Maples are not pruned at this time except in emergency.

**WATER** if the weather has been open with hot sun and little snow. Check especially on the south of buildings, steep slopes and sandy soil. Much damage can happen to woody plants if the soil around their roots gets too dry. The only way to know for sure if plants need water is to dig test holes around in various locations.

**REPAIR** fences, gates, walks and tools when the sun is warm but the ground still frozen. There is always some garden work that needs to be done at any time of year.

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Certainly it is wise to use coniferous plants (evergreens) frequently in most plantings, but it is well to remember that it is possible to get too much of a good thing. Evergreens are needed for their dark colors and beautiful a dreary, monotonous appearance.





February, 1952

25 Cents

# *The Green Thumb*

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# The Green Thumb

Vol. 9

FEBRUARY, 1952

No. 2

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**THE COLORADO FORESTRY AND HORTICULTURE ASSOCIATION**

**1355 Bannock Street**

**• Denver 4, Colorado •**

**• Tabor 3410**

## TENTATIVE PROGRAM FOR FIFTH ANNUAL ROCKY MOUNTAIN HORTICULTURE CONFERENCE

in Denver University Civic Center Classroom Building  
March 25-26, 1952  
Tuesday Forenoon

George W. Kelly, Chairman

- 9:00 A.M.—Registration  
9:45 A.M.—Welcome by Fred Johnson  
10:00 A.M.—Announcements  
Motion Picture—"Life of a Plant"  
10:30 A.M.—"A Horticulture Program for Colorado," Charles Drage  
11:15 A.M.—"Use of Native Material," Henry Gestefeld

### Tuesday Afternoon

Prof. J. V. K. Wagar, Chairman

- 1:30 P.M.—"The Need for State Parks," Harold Lathrop  
2:00 P.M.—"Our Heritage in Colorado—Let's Preserve It," Jos. W. Penfold  
INTERMISSION  
3:30 P.M.—"Landscape Design in Relation to 1950 Architecture,"  
Dr. Eugene Sternberg

### Tuesday Evening Session

- 8:00 P.M.—Soil and Water Conservation Demonstration—Pauline Lunka  
and Rollin Shoemaker, Denver 4H Club Champions  
8:30 P.M.—"Reading the Landscape," Mrs. Raymond Watts, Naturalist,  
The Morton Arboretum

### Wednesday Morning, March 26, 1952

Robert Ewalt, Chairman

- 9:15 A.M.—Announcements  
9:30 A.M.—"New Garden Varieties—Vegetables, Flowers and Fruits,"  
Charles Drage  
10:00 A.M.—"Insecticides," Prof. Lester Daniels  
INTERMISSION  
10:45 A.M.—"Value of an Arboretum to a Community,"  
Mrs. Raymond Watts

### Wednesday Afternoon

Dr. A. C. Hildreth, Chairman

- 1:30 P.M.—"New Garden Discoveries," Milton Carlton  
INTERMISSION  
3:00 P.M.—Panel—"Stump the Experts"—Henry Gestefeld, Mrs. Kathryn  
Kalmbach, Wm. Lucking, John Swingle, Mrs. Helen Zeiner  
4:00 P.M.—Flower Arrangement, Mrs. Leon Lippard, Chairman; Al Ryan

### ALTERNATE PROGRAMS

- 3:00 P.M.—Nature Leaders Session, Ruth Wheeler, Chairman  
"How to Interest Children in Nature," Mrs. Raymond Watts  
4:00 P.M.—Professional Demonstration, Arborists



Colorado Forestry and Horticulture Association

Organized in 1884

*"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."*

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FEBRUARY SCHEDULE

- Feb. 3. Sun. Snowshoe hike into the Herman Gulch Area. These places are beautiful in winter as well as summer.
- Feb. 7. Thurs. 8 P.M. at Horticulture House. A program on "Garden Planning". Details to be announced later. Now is the time to plan for the garden work to be done later. We will learn how to do it from experts.
- Feb. 17. Sun. Leave Horticulture House 8:30 A.M. Snowshoe hike into the Urad Mine country where there is usually plenty of snow and a beautiful view of mountains and forests.
- Feb. 28. Thurs. 8 P.M. at Horticulture House. "What a Malihini photographs in Hawaii". The flowers, trees, people and hills of beautiful Hawaii as shown by kodachromes taken by Miss Alfhild Alenius. Miss Alenius will tell the stories of this charming land as suggested by the pictures. If it is not all horticulture it still will be fun.
- Mar. 2. Sun. Leave Horticulture House 8 A.M. going to the Jarr Canon-Indian Creek Area looking for the first wild flowers of spring. If the flowers are not out there are many interesting rock formations to explore and photograph.

## PLANTING IS THE THEME THIS MONTH

WE asked the Colorado Nurserymen's Association to prepare material on planting methods, for use in this issue of the Green Thumb. They have responded with about a dozen pages of valuable material which should help every gardener get their new plants started right. The committee working on this included Maurice Marshall, Scott Wilmore, Stanley Brown, Charles Wilmore, George Amidon, Roy Woodman and Carl Schulhoff. Sketches were made by Max Capron.

---

### AFTER THE BUILDERS LEAVE— THEN WHAT?

TOO often the ground around a new home is levelled off as easily as possible and the lawn and a few trees hurried in, with little consideration of the quality of soil or even the presence of anything remotely resembling good soil. Then within the next ten years there is many times more expense for fertilizers, replanting and extra watering than would have been used to properly prepare the soil in the first place—and, in the meantime the lawn, trees, shrubs and flowers are only partly as good as they should have been.

Building operations usually cost more than expected, so the new home owner is confronted with the expense of landscaping the place with less than no funds. But because the Jones on both sides get their lawn and trees planted immediately the new home owner thinks that they must too, and it is done in the cheapest way possible.

Those in this position should learn that the best money spent would be to properly prepare the soil, before planting anything, even if this means putting off complete planting for several years.

A good procedure would be about in this order.

1. Prospect thoroughly all over the place, digging holes at least a foot deep and see what kind of soil, subsoil or other material is found.

2. Remove completely all lime, plaster, rubbish and gypsum subsoil, even if this means several truck loads.

3. Rough grade the grounds being careful to keep drainage away from the house and dispose of flood waters without damaging any part of grounds or the neighbor's.

4. Secure good top soil and fill any low places or give the whole yard a good dressing. Be sure that what you get is really soil from the top of a good field where there has been an opportunity over the years for the soil to be filled with decaying roots and stems of plants.

5. Work in all the humus that can be properly mixed with the soil. Work it in thoroughly and the deeper the better. Each 6 inches of soil treated might well take two inches of humus. This would depend some on the quality of material available. Fresh manure would be bulky but would have the greatest amount of chemical value as well as physical value. It would be dangerous to mix so much fresh manure with soil that was soon to have plants that it might lay in chunks next to the plant roots. Well rotted manure would be safer but less valuable. Peat would supply the physical properties to loosen heavy soil or make a sandy soil more retentive of water, but it would have little chemical value. Good leafmold or compost

has the good qualities of both manure and peat. Sawdust can be used in limited amounts if some additional nitrogen is given at the same time. Any decaying fresh vegetable matter will rob some nitrogen from the soil for a while and later repay it. Excessive fresh leaves or grass clippings would do the same but would not last as long.

This incorporating of humus in the soil should be done as long in advance of planting as possible. A machine which thoroughly mixed the added material with the soil such as one of the rototillers would be better than plowing or spading.

6. Now you are ready to do the finish grading, lay out the beds and borders and begin to plant grass, trees, shrubs and flowers as fast as you can wheedle Aunt Maggie out of a few dollars or you can forego a steak or two.

Things planted in this properly prepared soil will grow so much better that the extra expense will soon be saved in more efficient watering, less fertilizing, less pest control, and faster growing plants; and during this time there will be greater satisfaction from the garden because all the plants will be more vigorous and beautiful.

---

## DRAINAGE

Drainage is one of the important considerations in gardening, yet few people seem to even know what is meant by proper drainage. Directions for planting roses or bulbs will recommend putting a handful of sand, a few tin cans or some pebbles at the base of a plant. This may make the gardeners feel as though they had done their duty, but this is not drainage. Many fine plants of the mountains can not be successfully grown at lower altitudes because of lack of drainage. These plants may get a good rain al-

most every day where they grow naturally yet the water never stands around them, for the soil is made up of coarse particles and it is on a slope so that water cannot stand.

It is often forgotten that many plants need a certain amount of air in the soil around them as well as water, and excessive water prohibits the entrance of air.

Drainage does not consist of a few coarse things around the base of a plant but must in some way loosen up the soil so that excess water can drain out.

Just preparing the soil for its best physical character with peat, manure, compost or some such material will go a long ways towards securing drainage. It would take a lot of sand or gravel and this thoroughly mixed with the soil to give adequate drainage. Avoidance of low spots and prevention of floodwaters from neighbors' property or down spouts will help a great deal. Sometimes it will be necessary to put in tile which lead out to a lower level.

Some few plants tolerate soggy and heavy soil, but most of the nice ornamentals prefer and appreciate well drained soil.

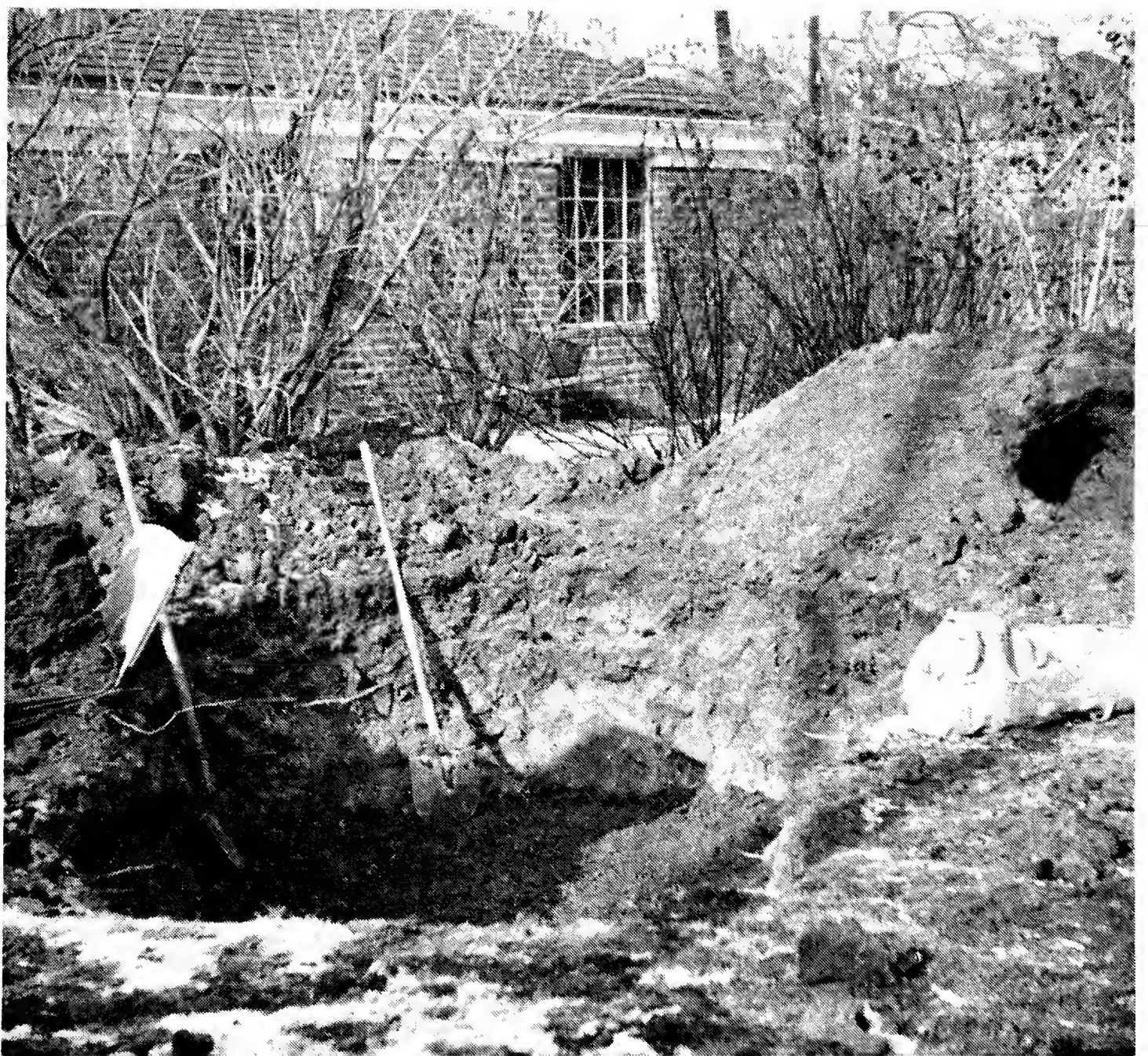
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## CLASSES IN LANDSCAPING

Landscape Architect, M. Walter Pesman announces that he will teach a new class in "Principles of Landscaping" under the auspices of the University of Colorado's Extension Service, beginning Feb. 6 and continuing until April 2. The classes will be held in the U. of C.'s building at 1405 Glenarm from 6:20 to 8 P.M. each Wednesday.

Mr. Pesman has that rare combination of a long experience in landscape work AND an ability to tell about it in an interesting way, so that all who listen are enthused with the subject. The cost will be \$10.00.







## TRANSPLANTING LARGE TREES

Large trees can be safely moved if proper care is given the digging and handling. It is a job requiring proper equipment and experience. A ball of earth of the proper size must be dug around the roots and this ball must be wrapped and bound and then handled so that it gets back into the new hole in sound condition.

If poor soil is encountered in digging the new hole it is important to remove much of this and replace with good soil so that the new feed roots from the ball may easily become established. For particular trees like oaks it is helpful to add peat to the soil and to take steps to counteract excess alkaline conditions.

We were fortunate in catching John Swingle moving some large trees a few weeks ago. The first picture shows the digging and shaping of a ball around the roots of a large spruce tree. The other pictures show steps in the moving of a large oak. The first picture at the bottom of the page on the left shows the hole dug, ready for the new tree. The depth is carefully measured, but the diameter is much larger than the ball so that prepared soil can be filled around it. This picture shows the bale of peat-moss and the sack of sulphur that was used to prepare the backfill soil. Upper picture on the right shows start of lifting the ball out of the truck, and the second picture shows the ball after it had been lifted and the truck run out from under it. The last picture shows it being dragged into place with cables and pulley. This same arrangement was used to drag it into the hole and adjust it in a vertical position.

Large trees can not be moved cheaply for they must be handled carefully. When the work is done properly there is no reason why they should not soon recover and grow.

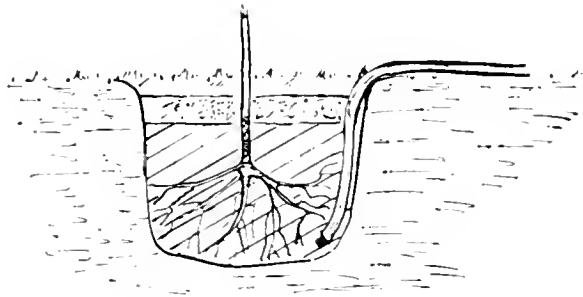


## PLANTING BARE ROOT TREES AND SHRUBS

*Use No Fertilizer at Planting Time*

Cut off bruised and mutilated portions of roots.

Set plant the same depth or slightly deeper than it was in nursery.



Settle soil by placing garden hose at bottom of hole and watering from bottom up.

See instructions in back of booklet for further watering.

Fill hole with good top soil, and soil prepared in advance, thoroughly mixed together. See instructions to follow for advance soil preparation.

When soil is workable, cultivate.

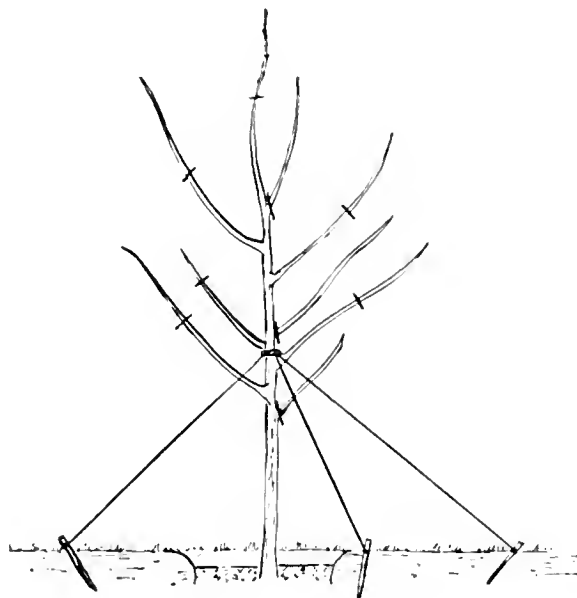
Make hole large enough for roots to spread naturally.

## PRUNING SHADE TREES

*Prune Severely at Planting Time*

Cut side branches back at least one half.

Remove crowded branches with a smooth cut, flush with trunk.



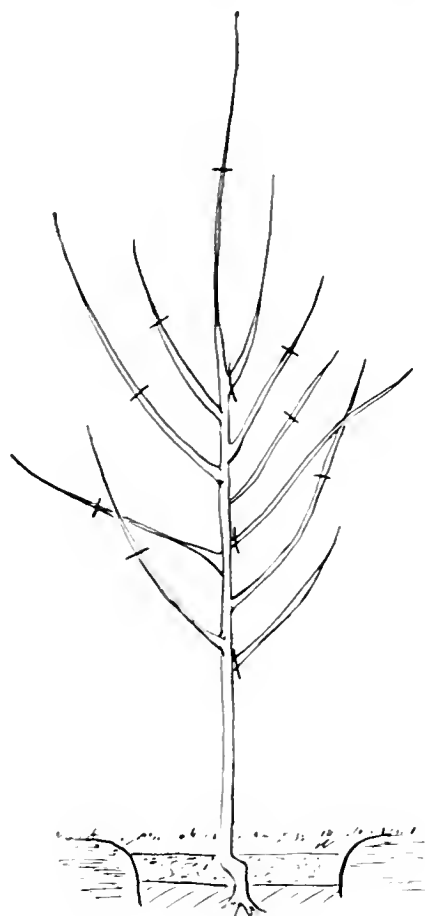
Cut leader back 3 or 4 buds.

Stake larger trees, to prevent wind from loosening trunk in ground.

Shade trunk of all valuable species, by wrapping with burlap, paper or screen wire.

## PRUNING FRUIT TREES

*Prune Severely at Planting Time*



Cut back at least  $\frac{1}{2}$  of top as shown.

Have lowest branch pointing to South West for a trunk shade.

Plant top of graft just below ground level.

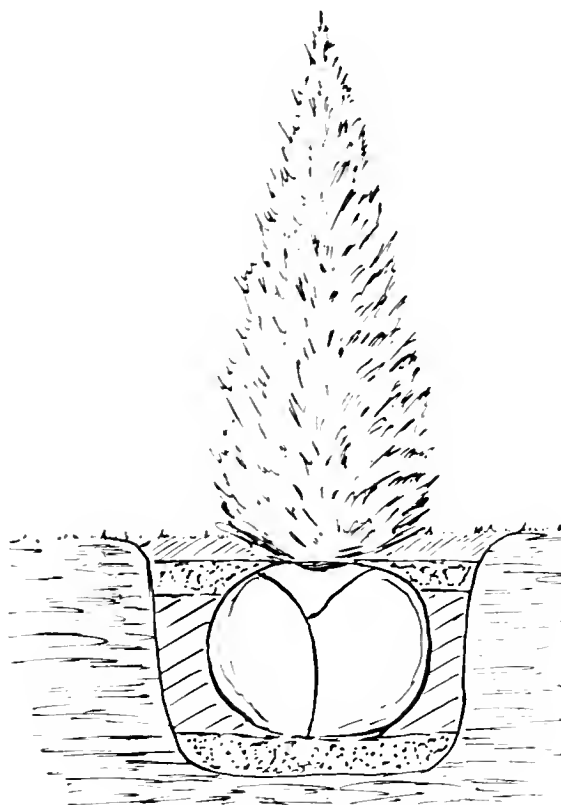
Remove crowded branches at trunk, with a smooth flush cut.

## EVERGREENS

*Do Not Remove Burlap*

Fill hole with good top soil. Do not use chemical or animal fertilizer. See back pages for advance soil improvement.

Top of ball should be set 2 inches below ground level.



Create saucer for watering the first summer.

Mulch or cultivate top inch of soil.

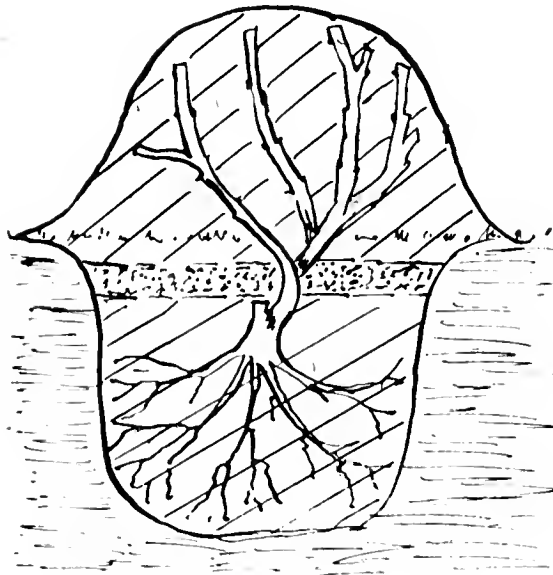
Compact footing with tamper, for stability, before backfilling.

Soak with slow running hose, placed near base of ball; back fill before turning on water.

## ROSES

Plant graft or bud slightly below ground level.

Dig holes large enough to receive roots in natural position.



Rewater once a week or 10 days.

Remove mound of soil gradually over a ten day period, as soon as new growth starts.

Back fill with good top soil.

Water thoroughly from the bottom of hole up, by inserting garden hose deep in hole.

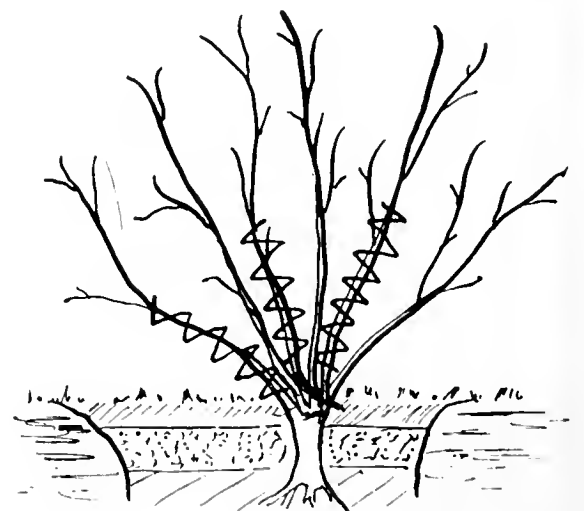
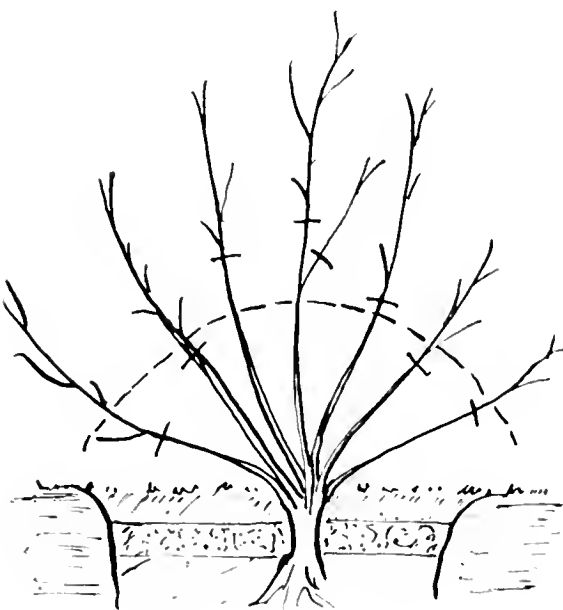
## SHRUBS

*Digging Hole and Watering Same As Shade Trees*

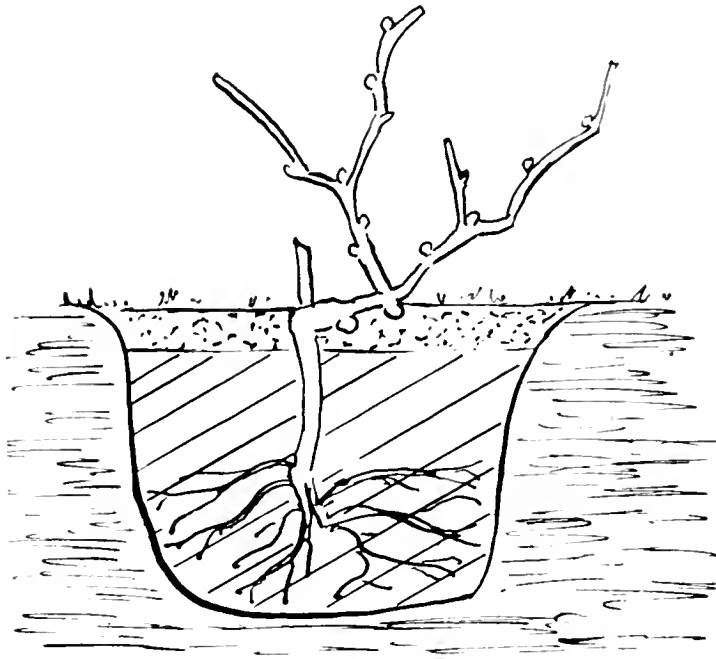
Cut Back Tops. At Least  
One-Half Either At Marks  
Or At Dotted Line.

OR

Remove One-Half The  
Canes At Ground Level.  
As Indicated By Zig Zag Lines.



## GRAPES



Plant just above second bud. Fill hole with top soil and improved soil (if necessary).

Water in from bottom up with hose as with all bare root plants. Trim top to 3 or 4 strong buds on each cane.

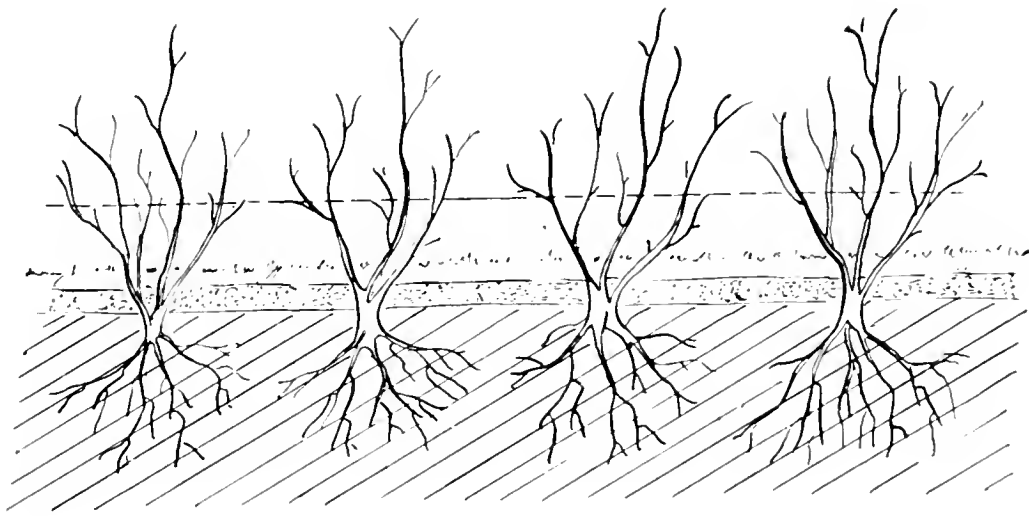
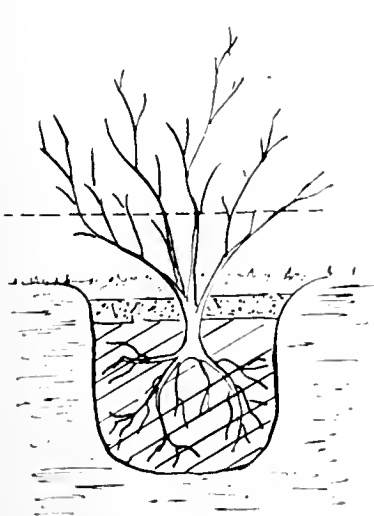
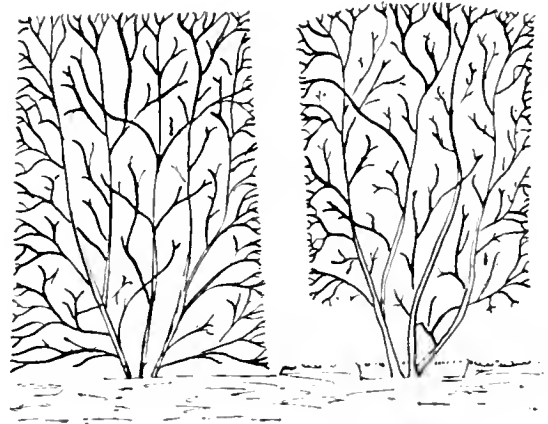
## HEDGE

Trench at least 12" wide for cultivating.

Plant in center of trench, roots uncramped.

Plant 6 to 12" apart in row. With canes planted slightly below ground level.

How to trim hedges—Always shape hedge wider at bottom in future trimmings.





## **WHEN YOU RECEIVE YOUR BUNDLE OF TREES AND SHRUBS**

Open a small portion sufficient to stick the end of the hose through and turn on the water, giving roots and packing material a good soaking. Plant immediately if possible. If planting is delayed a few days, set bundle in basement or garage, keeping it cool and moist.

### **ADVANCE SOIL PREPARATION**

As a whole the soil of the Rocky Mountain Region is satisfactory for all types of planting. Where planting has been carried out according to the foregoing instructions satisfactory results should be obtained. However where you have some doubt as to the fertility and friability of your soil the following treatment will help produce more luxuriant growth. Where preparation of the soil is necessary, the holes should be dug, the soil prepared and thrown back in the hole; followed by a thorough watering, at least several months before planting time. If possible, this should be done in the autumn for spring planting and nature will greatly assist in mellowing the soil. Many planting failures are the result of careless planting or improper preparation of the soil. Trees and shrubs respond to good soil and cultural practices with just as much certainty as do garden vegetables, but the period of development covers years instead of weeks and we are apt to lose sight of this fact.

Fresh manure of any sort should not come in contact with the roots of plants. Manure, that has been turned under, may still kill by moulding even after several years especially in cases where it is not thoroughly mixed with the soil.

### **Heavy Clay Soil or Gumbo**

Thoroughly mix in one-fourth peat moss and one-fourth leaf mold or very old cow manure. Do this as far in advance of planting time as possible.

### **Rocky, Gravelly or Excessively Alkaline Condition**

Remove entirely and bring in good top soil.

### **SPRAYING**

There are no complete or universal sprays on the market. To keep your trees, shrubs, roses, etc., in a healthy condition you should have some idea of the insect life found in the garden. Bacterial and fungus diseases and pathological disturbances are more complicated; usually requiring the advice of an expert for analysis. The chewing and sucking insects are comparatively easy to control, and should be accepted as a challenge to your gardening ability.

### **Chewing Insects**

Leaf-eating insects, such as worms, slugs on cherry, larva of codling moth on apple, caterpillars on almost anything, are controlled with a stomach poison such as D.D.T. or arsenate of lead.

### Sucking Insects

Aphids, red spider mites and scale are the most common forms of sucking insects. The aphids may be easily controlled by spraying with nicotine sulphate (Black Leaf 40). See insect pests common to evergreens. Red spiders are best controlled by a dormant spray of 10% lime sulphur applied during the winter and a summer spray of wettable sulphur.

Scale, which is quite a serious depredator of Elm, Poplar, Willow, etc., should have a dormant (after leaves have fallen) oil application, every 2 or 3 years. Trees usually require the use of high power spray equipment. If you are spraying for scale on small trees, lilacs, etc., remember that dormant oil and lime sulphur are not compatible. Whenever in doubt consult your nurseryman.

### The Nearest Thing to a Complete Spray

In most nurseries everything is sprayed sometime during the winter when the weather, wind and humidity are right. This is a dormant lime sulphur spray. It kills the eggs of many harmful insects, while not harming the lady beetles. It kills red spider mites which hibernate in crevices of bark and it acts as a fungicide. A properly applied dormant spray will take care of most insects, on evergreens, shade trees and shrubs until weather becomes quite warm, i.e., July or August. Never use dormant oil on evergreens. See evergreen and rose instructions.

Apple worms can be controlled with D.D.T. or arsenate of lead. A poorly watered and generally neglected plant cannot be invigorated with poison sprays.

### INSECT PESTS COMMON TO EVERGREENS

The two most common insects that infest the Juniper and Spruce families are red spider and aphids. Red spider is detected readily by the foliage turning to a yellowish green, and later to brown dead needles when the infestation gets real bad; usually starting near the ground on upright trees, but appearing most any place on the prostrate or low growing types. Treatment: Dormant lime sulphur (see Dormant Spraying). For summer control, consult your Nurseryman or Arborist. Use dusting sulphur or all-purpose dust or spray with wettable sulphur. Aphids are readily seen in colonies upon close examination, usually on the underneath side of the branches, or on the main stem near the top of the tree. When ants are noticed working around the branches of Evergreen, it is generally a sign of aphids being there. Easily controlled by spraying with Black Leaf 40, a tablespoon full to a gallon of water.

It is very important that anyone growing evergreens or roses learn how to keep them free of insects. We will guarantee that you will have infestations of bugs if you do not spray for these pests at least twice a year on evergreens and every ten days on roses. Rose spray: See your nurseryman for an all-purpose rose spray which contains an insecticide and fungicide.

### MULCHING

All soils are improved by a light summer mulching. The summer treatment may be leaf mold, compost, peat or animal manure well rotted. Cultivate this mulch into the top two or three inches of soil.

## WATERING

How a person goes about watering their garden, trees, shrubs and lawn is a good indication of the knowledge they have of a growing plant's requirements. A person with a green thumb does not keep plants saturated, nor does he permit drought to wither the foliage. The correct method falls in between these two extremes. Most roots are benefited by the entrance of oxygen into the soil by withholding water for a week or ten days, then giving a thorough soaking. There are exceptions to this rule. Some vegetation will not tolerate a dry period. Some trees will do better on a longer interval between waterings, especially Birch, Cherry, Linden and Oak. But keep in mind, you are not watering the roots of a large tree, by sprinkling for ten minutes. It may require 4 hours or more to soak down 2 or 3 feet.

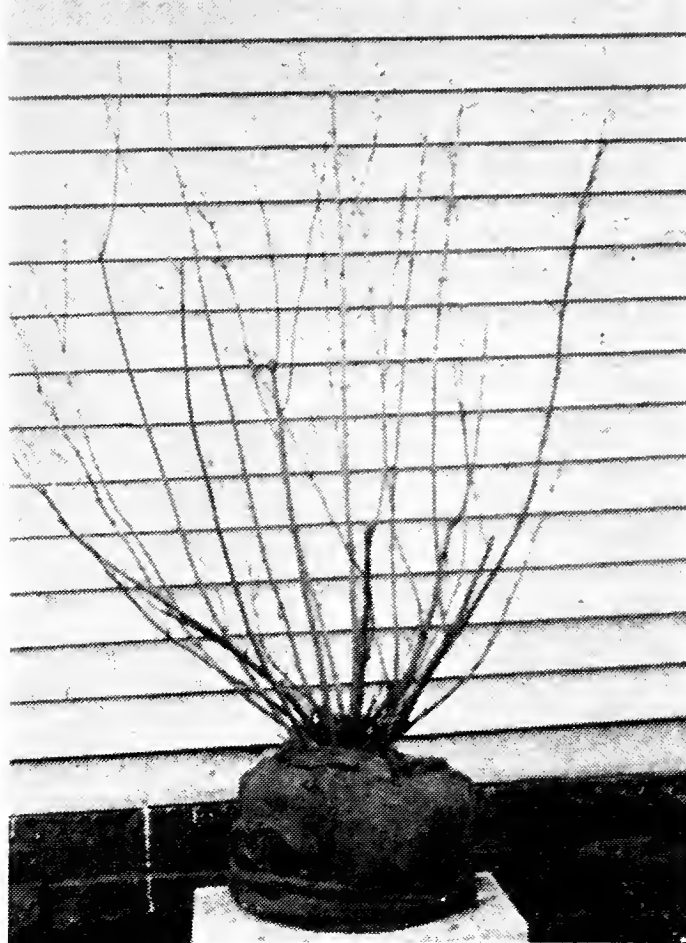
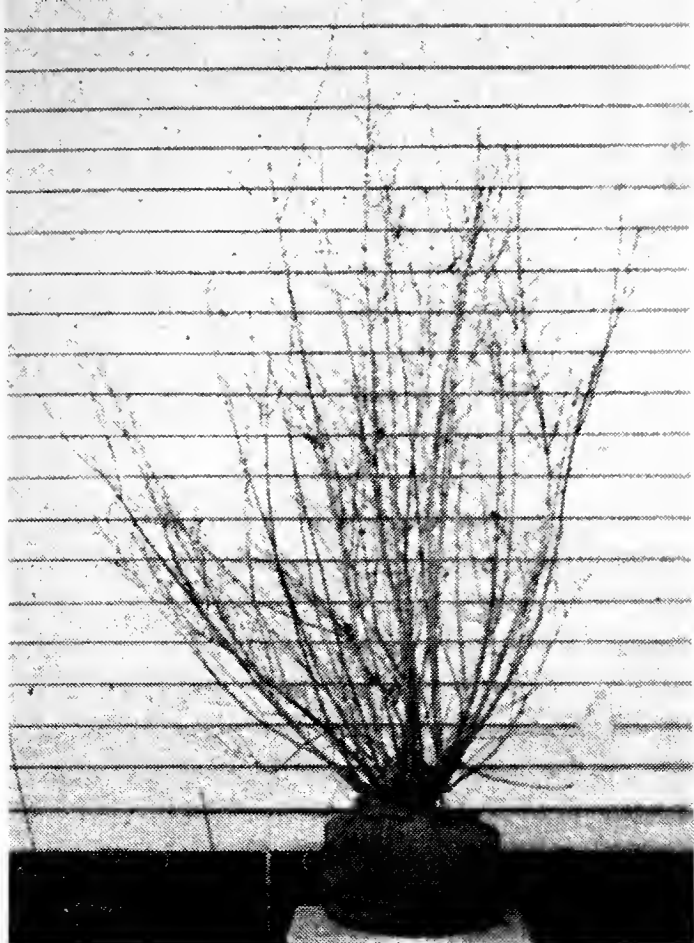
We repeat; Overwatering is caused by the frequency not the quantity of water. Until you know from experience, you should dig down occasionally near the roots (but not touching) to ascertain the moisture content of the soil. When you find the soil too dry to form a ball, when squeezed in the hand, it needs water, if it makes a moist ball, hold off on the watering. The surface soil should be cultivated to conserve moisture, or better still have a surface mulch of grass clippings or other organic material. Do not worry about the dryness of the top inch or so of ground.

## FALL OR WINTER CARE OF TREES

Due to the arid and peculiar climate that exists throughout the Plains Area, it is of vital importance that trees, shrubs and evergreens be given special attention before going into Winter. In September the need for heavy watering is lessened. We should ripen up woody plants by withholding water at that time, after leaf fall they will need a good soaking.

In this region we usually have long dry Falls after the trees have defoliated, and as a rule the tendency is to forget to water the various items in our landscaping. This is of great importance where we have had little, if any, Fall moisture from the skies. Consequently not only the trees and shrubs, but even the perennials are almost sure to suffer, and freeze or be Winter-killed entirely, if added moisture is not supplied to get them properly soaked for withstanding the rigors of Winter—and thus avoid what is known as “dry-freezing” or winter-kill.

Some thirty days or more after you have put away your hose for the season, is about the right time to bring it out and thoroughly soak everything up again. Remove the nozzle from the hose, using the open end, and on normal sized trees and evergreens allow a stream of water about pencil size, to run at or near the base of the tree for two or three hours. On larger trees this should be repeated by moving the hose from time to time to a new location, on the opposite sides of the tree. Shrubs and perennials of course treated in the same manner, but with smaller running time—possibly an hour or less, according to size of the plant or shrub. This slow method of watering permits seepage deep into the ground, down around the roots where it does the most good, and where it will last well into the winter. The nearer one can anticipate when the ground is going to freeze up, and get your watering done just ahead of that time—the better your stock will come out in the Spring.



*Honeysuckle bushes dug ready for transplanting.  
On left, as they come from the field and right properly thinned and trimmed.  
Photos by D. W. Spangler.*

### TRIMMING AND THINNING IN LATER YEARS

You sometimes hear it said that a landscape architect or nurseryman has planted too much material. It is physically impossible to make a planting that doesn't look skimpy and which doesn't require thinning and pruning 4 or 5 years later. Call your nurseryman or arborist for an occasional check or in ten years you will have a leggy, top heavy planting.

## PLANT AMERICA

### *It Pays*

In increased community pride.  
In a more pleasant climate.  
In conservation of soil and water.  
In increased business and property values.

In greater beauty.

Much of our state has natural beauty which needs protection, but a great part of the state, especially that in the eastern and western edges needs a great deal of planting of appropriate plants.

Here are some of the projects that a community might select.

1. A community garden.
2. Suitable street trees, properly cared for.
3. Landscaping and planting of public buildings—schools, airports, athletic fields, churches, court houses etc.

4. Beautifying highway entrances to the community. (This is usually the rawest place in the community, and should be the best.) Encourage owners to landscape around tourist accommodations, gas stations, restaurants and roadside signs.

5. Developing a local park or clean-up and replant existing parks.

6. Clean-up and plant the banks of local streams that have been denuded or made into dumps.

7. In suitable locations plant a community grove, possibly on donated or tax land.

8. Plant trees where ever the land is used for nothing else.

9. Sponsor school, 4-H, Junior garden clubs or Scout gardens, instruction hikes and demonstrations.

10. Encourage proper landscaping and planting of private homes.

See your local nurseryman for advice and assistance.

# AN ALL-WHITE PERENNIAL BORDER

HELEN FOWLER

**I**T IS but a few years ago since one-color borders were receiving various tryouts. Unfortunately they were used as main borders of the home grounds, with usually disappointing results. A section of a large garden planted to an all-white border could have more distinction and variety than might be supposed. The effect is cool and quiet and a pleasant place at night. A background of evergreens would be most effective, and gray-foliage plants such as *Arabis*, *Dianthus*, *Cerastium* and others, both tall and dwarf, should never be omitted. A stone wall makes a nice enclosure with trellises, arbors and seats, which could be made best of wood and painted a silver-gray, or, if preferred, allowed to weather.

If *Helleborus niger* can be considered a spring flower, then this Christmas Rose comes first: here in the Rocky Mountain area it overlaps from winter but it should never be planted unless in a well-protected spot.

The spring overture includes a few minor bulbs, such as *Crocus* and *Galanthus*, followed closely by one grand opening chorus, selected from Tulips, Hyacinths, Daffodils, *Arabis*, *Erinus*, *Phlox subulata*, *Primulas*, *Iris pumila* and *Violas*.

In the wings waiting are *Columbine*, Dutch *Iris*, Painted Daisies and Elder Daisies. The white Oriental Poppies bloom at this time but you will not like their sick look. June follows with Roses, Peonies and *Delphiniums* and July brings the lovely *Phloxes* and Shasta Daisies. Not many whites are found in the *Chrysanthemum* group but plenty if planted with the tall, hardy Asters—Mt. Everest, Sam Banham and Climax.

If gardens are properly cared for—dead blooms removed, soils kept loose

done (especially on Roses and *Delphiniums*), then continuous bloom may be had from May, sometimes even April, until heavy frost. We spray roses to ward off attacks of diseases and insect pests, 700,000 species of insects have already been classified and I sometimes think a good many of them attack my roses all at one time. In the case of *Delphiniums* spraying must be done the very minute infestation is noticed.

I am writing this article on the last day of 1951. It is cold, windy and sunless but as, in spirit, I walk through our many lovely gardens, they all seem to reflect the calm certainty of our Faith.

In the following lists, only the White-Flowered forms of the plants are intended so Latin variety names are omitted.

## **Shrubs or Small Trees To Be Used As Accents or Background**

**SPRING - FLOWERING:** *Exochorda racemosa* (the pearl bush); *Philadelphus virginialis*; *P. coronarius*; *Prunus glandulosa* (Flowering almond); *Spiraea arguta*; *S. prunifolia*; *S. thunbergia*; *S. vanhouttei*; *Viburnum lantana*.

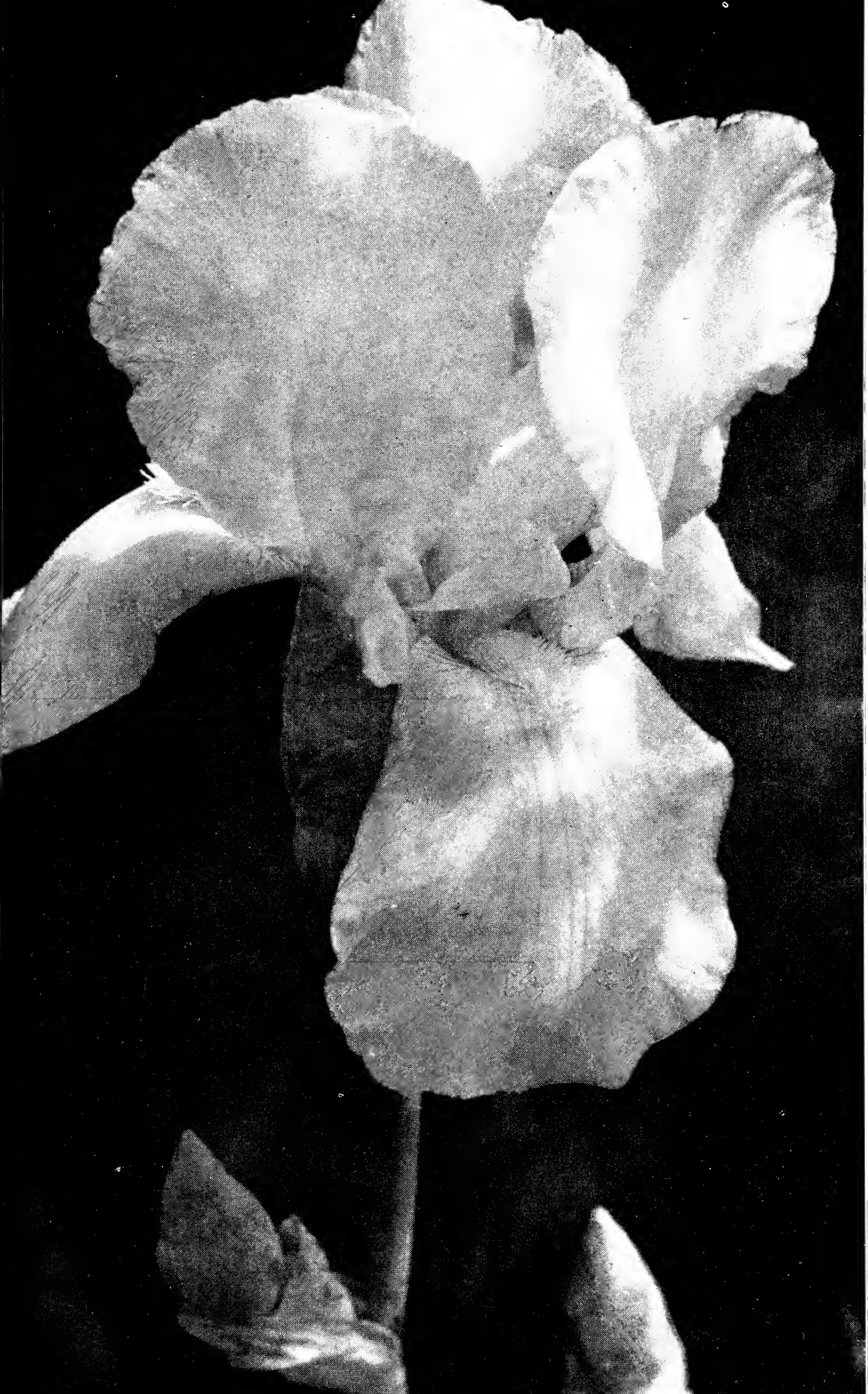
**SUMMER AND AUTUMN-FLOWERING:** *Hydrangea A. G.*; *Rosa multiflora*; *RR rugosa*, *spinosissima*; *Sambucus canadensis*; *Syringa*, many varieties; *Viburnum trilobum*.

## **Plants for Use at Back of Border**

**SUMMER-FLOWERING:** *Althea rosea* (hollyhock); *Aruncus sylvestris*; *Macleaya cordata* (*Bocconia cordata*); *Campanula*, several; *Cimicifuga racemosa*, *C. simplex*; *Delphinium*; *Filipendula*, several; *Thalictrum aquilegifolium*, *T. dipterocarpum*; *Valeriana officinalis*.

*valeriana*







*Some of the white flowers useful in All-White gardens. Above scillas. Below hollyhocks, and on preceding page iris. Photos by Bruce Korphage.*



**FALL-FLOWERING:** Aster; Boltonia asterioides; Chrysanthemum uliginosum; Phlox, several; Hibiscus; Valeriana officinalis.

### **Plants of Medium Height**

**SPRING and SUMMER FLOWERING:** Aquilegia vulgaris; Achillea; Campanula, several; Chrysanthemum maximum; Clematis recta; Dianthus barbatus; Dictamnus; Gyp. paniculata; Hesperis matronalis; Heuchera; Iris (bearded) I. siberica, I. spuria; Linum; Lobelia; Lupinus; Polemonium; Pentstemon digitalis; Physostegia virginica; Platycodon; Veronica.

**FALL-FLOWERING:** Anemone japonica; Aster; Eupatorium; Hosta.

### **Low-Growing Plants for Foreground**

**SPRING-FLOWERING:** Aquilegia flabellata nana; Arenaria montana; Arabis albida; Asperula odorata; Convallaria majalis; Dianthus deltoides; Epimedium macranthum; Erinus alpinus; Gypsophila cerastioides; Iberis sempervirens; Iris, dwarf varieties; Myosotis; Phlox subulata; Silene alpestris; Statice armeria; Tiarella cordifolia; Teucrium; Viola; Violets.

**SUMMER-FLOWERING:** Anemone sylvestris; Campanula carpatica; Delphinium grandiflora; Erigeron; Galium; Helianthemum; Nierembergia rivularis; Primula japonica; Scabiosa caucasica; Sedum; Thymus serp.; Tunica saxifraga; Papaver nudicaule (Iceland Poppy).

**AUTUMN-FLOWERING:** Aster ericoides; Aster ptarmicoides; Chrysanthemum arcticum; Papaver nudicaule.

### **Spring and Summer Flowering Bulbs**

Allium neapolitanum; Camassia leichtlini; Colchicum Autumnale, C. speciosum (autumn); Crocus biflorus,



and hybrid crocuses (Spring flowering); *Eremurus elwesii*, 10-12 ft.; *Erythronium californicum*; *Fritillaria meleagris*; *Galanthus* (snowdrop) species; Hyacinths, double and single; *Leucojum aestivum*, *L. vernum* (snowflake); *Lilium auratum* *L. candidum*, *L. regale*; *Narcissus*, many varieties; *Ornithogalum umbellatum*; Tulips, many varieties; *Scilla campanulata* (*S. hispanica*).

### Summer-Flowering Bulbs, Tubers, Corms To Be Planted in Spring

Dahlias, tall and dwarf; *Gladiolus*; *Galtonia candicans* (*Hyacinthus candicans*); tuberose, double and single.

CLIMBERS: *Clematis*, *Duchess of Edinburgh*, *C. montana*, *C. paniculata*, *C. veitchiana* (this white has a touch of yellow); *Lonicera halliana*; *Lathyrus latifolius* (Hardy sweet pea); *Polygonum auberti* (silver lace); Roses, many varieties.

ANNUALS FOR SUMMER FLOWERING: *Antirrhinum*, tall and dwarf; Aster, tall and dwarf; *Bellis*; Candytuft; Sweet Sultan; Cornflower; *Clarkia*; *Cosmos*; Chinese pinks; *Godetia*; *Gypsophila elegans*; Larkspur; *Mignonette*; *Nicotiana affinis*; Pansies; *Petunias*; *Phlox drummondii*; Poppies; Sweet peas; Stocks; *Verbenas*; *Zinnias*.

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## HOME GROUNDS PLANNING COURSE

A NEW service is being arranged for the benefit of all those who have new homes and want help in the planning of the landscaping of them in the most effective way. George Kelly will soon start a series of classes to give individual help to all who need it.

The emphasis will be on help for the specific and individual problems, and discussions and demonstrations will give a background for this individual help. The course will consist of seven indoor sessions, arranged at a time and place most convenient, at least one outdoor plant study session, and one period of individual help for each student.

There will be a charge of \$15.00 for the course, and this will admit one or both members of a family. A membership in the Colorado Forestry and Horticulture Association is included in the price. This will bring the Green Thumb Garden Magazine for 12 months. The book, "Rocky Mountain Horticulture is Different", will be a

required textbook, but we will assume that everyone already has a copy. A minimum of ten people who can meet at one time and place will be necessary for each class.

Instruction will cover the use of proper plants for every situation, the principles of design or orderly arrangement, the planting and care of plants, maintenance and control of pests, proper use of water, fertilizers and mulches, and details of how to put a plan on paper.

If you are interested let us know at once giving preference as to place and time. These classes may meet in someone's home, a public building or at Horticulture House. Outlying districts may also arrange these if there is a sufficient number interested.

Registration fee will be taken at the first session, but any one is invited to attend this first session free and see if it is the thing that they want.

Learn how to do it right the first time and save time and money.

## 1952 ALL-AMERICA FLOWERS

By W. RAY HASTINGS

Executive Secretary, All-American Selections

**F**OUR new flowers, 1952 All-America Selections, are led by Fiesta cosmos, the silver medal winner. Honorable mentions go to Ballerina petunia, Persian Carpet zinnia and Globe Mixed phlox. All are popular annuals, easily grown from seeds.

Fiesta is an early Klondyke cosmos in the festival colors of its native Mexico, the royal colors of Spain. This is the first cosmos in which scarlet appears, with wide stripings of scarlet and gold lengthwise in each petal. Fiesta is the earliest cosmos to bloom, the easiest of flowers to grow in any sunny location and is a trouble-free garden subject for cut-flowers or border display.

The bushy plants reach about thirty inches in height, their lacy and airy foliage a foil for many wiry-stemmed flowers over weeks of blooming. Growth is similar to Orange Flare, with the extra and somewhat ruffled petals of Orange Ruffles, semi-double in appearance.

Ballerina petunia delights us with growing salmon-pink blooms from early spring until late fall. Belonging to the dwarf giant fringed class, the large flowers are daintily laced and ruffled for beautiful cut-flower arrangements as well as for a continuous garden show. Its hybrid vigor provides uniformity in strong, compact growth and steady production of lovely big flowers. Ballerina is well adapted to bedding, informal edging, pots and window or porch boxes.

Persian Carpet is a most descriptive name for the oriental colorings in a new strain of Mexican hybrid zinnias. The plants grow a foot or more tall,

with rather small flowers in comparison with the giant zinnias, but the two-inch flowers are fully double, borne in profusion over a long season and each plant seems to produce flowers of magically different coloring.

Colors cherished by the Latins and oranges, purples, golds, rich browns and hennas woven into the treasured rugs of Persia seem to come to life in this new strain of zinnia. Small enough for porch and patio boxes, its even bushy habit and more attractive foliage than larger, adapts it to beds and borders. It provides a wealth of cutting material, always in demand.

From Japan we have an entirely unique shape of annual phlox plant. Globe mixed phlox refers to the globe or dome-shaped plants. They are covered with regular sized flowers although the plants are only about six inches high and somewhat broader. The foliage is practically covered with their mounds of bloom, colorful for low bedding, ground covers, rock and wall gardens, pots, boxes and edging. Dominant colors are phlox red and white, with some pink and salmon shades present. It is not a balanced color mixture although striking and rich. Apartment and patio gardens will find wide use for Globe phlox.

These flower winners, along with many other entries, have been widely tested over the past two years in all sections of the United States and Canada. They are new and different, quite easily grown and make a colorful garden display over a long blooming season. Seeds should be obtainable through any reliable seedsman as long as they last this first season of distribution.

## WHAT GARDENING MEANS TO ME

By HAYDN S. PEARSON

Condensed from "Horticulture"  
Magazine

First, gardening gives me a chance to create both beauty and food. I know we need more of both in this world. I am sure that the ideals of democracy can never be sold to hungry men and women, boys and girls. My work, experimenting with asparagus and strawberries, raspberries, muskmelons and other crops will never create much difference on a global basis; but there are hundreds of thousands of families right here in our own beloved nation where men and women are fighting a good fight to own homes, raise families and assume their share of civic duties. If I can show a family how to raise more food, if I can show the opportunities of country-side living, perhaps my work has some value.

I know I would not be satisfied to raise crops alone. In a row of glorious gladiolus, in a bed of Autumn chrysanthemums, in the regal beauty of a huge sunflower, I harvest something that satisfies the heart. Man does not live by bread alone, and one of life's most difficult lessons for many of us is to learn that basic fact. You cannot put a price tag on a sunset, nor assay in money the beauty of one perfect flower.

Gardening to me is the feel of good humus in my hands; it's the placing of seeds in the earth's breast and watching slender spikes of green develop into full-grown plants. It is the peace of dawn when garden soil is moist and dark; it is the good, pervading warmth at midday. It is the lengthening shadows when day is done, and dusk steals down from the mountains across my fields. It is the brooding

beauty of a Summer's evening when stars light the streets of the sky, and the fragrance of soil is rich and satisfying.

Gardening means work and planning; it means disappointments as well as triumphs. But if a man delights in gardening, nothing else satisfies him. It is physical labor, but it is also pleasant dreaming; it is working with great and fundamental forces of our planet. And while it may be a bit old-fashioned to say it, I also believe that a man can find a part of life's meaning as he gardens. It requires faith to garden—and life without faith is meaningless. I think a true gardener catches glimpses of the eternal verities when he is in communion with the soil which gives him both food and beauty.

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### NATIONAL ORGANIZATIONS

Some of our members may be interested in knowing of National organizations which are helping along on some particular phase of the work that we are trying to do in Colorado.

The American Forestry Association, 919 17th St. N.W., Washington 6, D.C. has been promoting better forestry in the U. S. since 1875. Dues are \$5.00 per year and include subscriptions to the American Forests Magazine.

The National Parks Association, 1214 16th N.W., Washington 6, D.C. is an independent, non-profit organization with nationwide membership guarding America's heritage of scenic wilderness. Membership is \$3.00 and up which includes an excellent quarterly magazine, "National Parks".

The Nature Conservancy, 1840 Mintwood Place N.W., Washington 9, D. C. is a group of people interested in preserving typical spots of Nature "as is" all over the country. Dues are \$2.00 and up.



## DELPHINIUM—LARKSPUR

L. J. HOLLAND

THIS genus shares with *Aquilegia* the distinction of being the most widely grown of the Crowfoot family. There are some sixty odd species scattered throughout the North Temperate Zone, nearly a third of them being native to our own Colorado. Two species are indigenous to Equatorial Africa; *D. candidum*, a pure white from Uganda, and *D. macrocentron* (The Emerald Delphinium) from Ethiopia. Oddly enough, the latter is reliably hardy here with but little protection. But none of the species are worthy a place in the border, except

*White Delphinium in the garden of Mr. and Mrs. John Evans.*



as novelties; the garden varieties all being hybrids.

Although the words "Larkspur" and "Delphinium" are synonymous, the former is usually applied to the annual varieties, while the latter is reserved for the perennials. Both prefer plenty of sun, but will do well in semi-shade, and both do best in a soil with a pH of 6.0 to 7.0 (Neutral). The perennials are voracious feeders; should be planted in enriched soil with extra plant food added annually. A good plan being to give the plants a winter mulch of well rotted manure, and spade this in thoroughly in the Spring, thus adding humus to the soil. The annual sorts, on the other hand, are likely to sacrifice flowers for foliage if given too rich a soil.

Seeds of the annuals are best planted in late Autumn, to germinate the following Spring, giving weeks earlier bloom than Spring-planted seeds. The perennial sorts may be bought from plantsmen or grown from seeds, which germinate in about three weeks. I prefer planting the seeds in a cold-frame in April and transplanting to their permanent place in late August.

Since it takes no more time or trouble to grow a fine variety than a poor one, I recommend only the Imperial strain of double larkspur and the Round Table Series of delphinium.

The Knights and Ladies of the Round Table are as follows:

King Arthur: Royal Violet, with a white "bee" in the center.

The Black Knight: Dark shades of violet, with a dark bee.

Guinevere: Lavender, pale blue center and edging; dark bee.

Cameliard: Pure lavender self with white bee.

Lancelot: Opaline lilac with white bee.

Galahad: Pure white, even the bee.

Percival: White, with contrasting dark bee.

Blue Bird: Medium to deep blue; dark bee.

Summer Skies: Pale to azure blue; white bee.

There are three species that are worth growing mainly because they are "something different", being in the novelty class. *D. macrocentron*, previously mentioned, has flowers that are blue and green or yellow and green. Fairly easy from seed. *D. zalil*, (Persia), has pale yellow flowers in loose racemes. *D. nudicaule*, (N. Calif.), has sepals of scarlet and yellow petals; however, some flowers may be a "self" of either red or yellow.

These last two are slow germinators and should be planted in late Autumn or earliest Spring, while the ground is still cold.

Aphids are about the only insect seriously affecting delphiniums in this area, and they are easily controlled. Well grown specimens are practically free from disease; Leaf-spot and Crown-rot, the twin scourges of more humid sections being almost unknown.

Most writers on the subject of delphiniums advise working extra lime into the soil; don't try it here, most of our soils are alkaline enough.

## A POSSIBLE RETURN OF THE ROOF GARDEN

HELEN FOWLER

With high-building architecture stepping down to low, flat terrace roof gardens can easily become popular. In many, modern American cities penthouses are found on top of tall buildings, which often make desirable residences, sometimes elaborately developed, as, notably, in New York, with garden terraces and luxuriant interiors.

A deep soil, the ever-prevailing high winds and insufficient moisture are always difficult features to manage. Perennials and annuals are planted wherever there is space, but by far the most satisfactory plants are found to be the spring-flowering bulbs. With provision for windbreaks and sufficient depth of soil it is possible to include shrubs and even trees, allowing penthouses to be grand or simple, with expenditures in keeping with the taste of the owners.

Pots of all varieties are definite terrace ornaments; they add color and charm to any raised, level space and have the advantage of being easily moved and placed where a touch of color is needed in season.

The first roof-gardens were probably copies of the experiences of the women of Greece, when they placed potted-palms around the statue of the beautiful Adonis to celebrate the return of spring.

## GROW MORE—PRESERVE MORE—USE MORE

### *Garden and Food Preservation Program to Continue*

The National Garden and Home Food Preservation Program should be continued in 1952 along lines established in 1951 according to Under-Secretary of Agriculture Clarence J. McCormick. Mr. McCormick urged all groups interested in gardening and home food preservation to continue their full cooperation. Such a program, he said, can make a real contribution to diets and health as well as to our food supply; also there are other values that come to families having good gardens. He said that while total farm output this year is at a record level our requirements for food are so high that it is essential that the Nation make the best use of all sources of food.

## OTHER COLORADO COLUMBINES

By WILLIAM A. WEBER

COLORADO is most fortunate to have selected for its State flower one of its most handsome and truly aristocratic wild flowers, the Colorado Blue Columbine, *Aquilegia coerulea* James. Although the Colorado Columbine is not limited to our State, it certainly reaches its fullest development within our boundaries, and there are few mountainous areas in Colorado where it has not been found. The blue columbine reaches its peak of blossoming at the height of the summer tourist season and it is doubtless responsible in some measure for the popularity of Colorado as a summer vacation spot. The blue columbine really belongs to Colorado in another sense, because it was here that the very first plants of this species were seen and collected by Edwin James on July 11, 1820, in the scrub oak brush around Palmer Lake, between Colorado Springs and Denver. It is encouraging to see that the people of Colorado are beginning to appreciate their responsibility to future generations of preserving this esthetic symbol of the Colorado Wonderland.

The Colorado Blue Columbine, however, is only one of seven equally attractive and interesting columbines which grow in the State of Colorado. In fact, a few of our more diligent alpinists soon discover that it is not even the only blue-flowered species. Our choicest species, *Aquilegia saximontana* Rydberg, hides in rock crevices on high alpine ridges, usually around 12,000 feet altitude. This, the Rocky Mountain Columbine, is an exact miniature of our State flower. Having tiny flowers only about a centimeter long, with very short, curved spurs, this blue columbine is most closely related to a Himalayan

species. It is only found on the high alpine peaks of Colorado.

All of the principal color types in columbines, namely, blue, red, and yellow, are found in native Colorado species. The most common red columbine is *Aquilegia elegantula* Greene. This has a smaller flower than the common columbine of eastern United States. *Elegantula* ("the little elegant one") is most common in forests through the southern half of the State, and is found as far north as Grand Lake.

We have two other red-flowered species in Colorado, but these are very rare, and strangely enough, they inhabit some of the most arid locations in Colorado. One is *Aquilegia triterinata* Payson (the name referring to the cutting of the leaves, thrice-three-parted), which is found in sheltered places at the bases of cliffs in the Grand Hogback Ridge near Rifle. The other species, only discovered a few years ago (1949), is *Aquilegia Barnebyi*, named for one of our botanist friends from the State of New York, who first found this species growing on a hot, dry shale slope along Piceance Creek near Meeker.

We have, in addition to the blues and reds, two kinds of yellow-flowered columbines in Colorado. The first, *Aquilegia chrysantha* (meaning yellow-flowered), ranks in interest close to the Colorado Blue Columbine because of its long, slender golden spurs, which make this species a very desirable garden subject. The long-spurred Yellow Columbine is found sparingly in the southern part of Colorado, and seems to be common around Colorado Springs.

The second yellow columbine, and the last of our series of seven, is rarely

seen by the tourist because it grows in out-of-the-way crevices and cave-shelters on the vertical cliff-faces of the canyon country of western Colorado. This is *Aquilegia micrantha* Eastwood. This, the small-flowered columbine, must have been a familiar sight to the cliff-dwelling Pueblo people of the Mesa Verde and the basket-makers of the Colorado and Yampa River valleys long ago, because it still graces the entrances to many of their caves. This columbine is most easily recognized by its very pale yellow flowers (sometimes almost white) and by its somewhat sticky foliage.

Every once in a while, someone reports a columbine which does not have the characteristic "spurs" by which columbines are usually recognized. These spurless columbines are apparently just genetic forms, or "sports" which occur in colonies of typical spurred individuals. Spurless forms are frequent in *Aquilegia coerulea*.

The different species of columbines cross freely because there are apparently no genetic barriers to prevent their interbreeding or to prevent the survival of the offspring of crosses. Therefore, wherever two different kinds grow together, either in the wild or in the garden, hybrids may be expected to occur. These may usually be recognized as plants which combine or blend the characteristics of each parent. The offspring of the hybrid plants may resemble more closely one or the other species, while still retaining some mixture of characteristics. Some of the garden strains of columbines are hybrid forms which typically do not breed true from seed. Accidental pollination of other species, or simple cross-pollination within such a group of hybrid plants probably explains the apparent degeneration of garden plots of fancy columbines back to plants resembling some

wild type instead of maintaining the spectacular hybrid of the seed catalog.

Aside from the color forms produced by hybridization, there exists a great color range within kinds of columbines. *Coerulea*, for example, displays colors ranging from purple through blue to pure white. Some of this color variation is apparently caused by different light intensities and qualities. The red- or yellow-flowered species, while varying in the amount of red or yellow, generally cannot be expected to vary toward a clear blue.

Most Colorado gardeners need not be reminded of the value of columbines for shaded as well as for sunny spots in the garden. Nevertheless, there is room for experimentation with some of these other native species which may turn out to be real gardening discoveries. And let us remember, as we continue to become conservation-minded, that our State Flower has these cousins which also deserve our consideration.

---

### GARDEN STUDY GROUP

The third Tuesday of each month The Study Group of Garden Friends will meet at Horticulture House for luncheon at 12:30 followed by an hour of intensive study of garden problems led by Mrs. Schoo. This group will be limited to 20 but other groups will be started if there are more who appreciate this plan of study, eliminating the unnecessary "business" which so often takes up much valuable time.

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## PERSISTENT FRUIT

**I**T is interesting in winter to notice the fruits of various woody plants that are persistent throughout part or all of the season.

One of the most conspicuous combi-



*Above—fruit of Gray dogwood. Below, Mountain Ash.*



nations in the hills is the red hawthorn berries and the fuzzy white heads of the clematis fruit that climb over them. Birds and animals soon eat the hawthorn apples and the light heads of the clematis will eventually blow away as intended and probably start more clematis plants. These native plants give a good idea for nice combinations of cultivated, ornamental plants.

Looking lower down as we tramp the hills, there will be seen the red fruit or "apples" of the wild rose and often the white berries of the native Snowberry. These are very ornamental and furnish some wildlife food.

One of the persistent fruits which are commonly seen on dry, open hillsides are the fuzzy white corkscrews of the Mountain mahogany. The setting sun glistening over a hillside of these shrubs is a beautiful sight. They are ingeniously adapted to flying through the air and boring down to the soil where they may start a new plant.

Of course, the native Alder and Birch shrubs retain their cone-like catkins all winter and are very attractive especially against a newly fallen snow.

The cones of Pine and Spruce and the "Berries" of Juniper are still our most common and attractive persistent fruits. They are much in demand for decorations around Christmas time. Let us hope that they never become as popular as the Douglas fir trees are for Christmas use, for they might be seriously damaged by over-cutting, and they are really much more attractive as they are found in the wild.

With a little snow on the ground to hide fallen leaves and grass, try identifying as many of the stems that stick up as possible. It is a good game.



You will notice, first of all, the tall Mullein and Green Gentian stalks, then such things as Winged Buckwheat, Milkweed, Yarrow and Asters. Most of the tall and medium tall plants of the hills can be identified in winter by their stems, if they are carefully studied.

*The interesting fruit of Linden. Little berries attached to airplane wings.*



## ARE YOU A GARDEN SNOB?

By ELLA ROARK

**A**RE you a garden snob? Do you grow (or attempt to grow) only rare, exotic flowers that have a brief flowering season and are gone? Do you "stick up your nose" and refuse to grow anything your grandmother had—or anything that anyone has ever told you grows wild in another state? When some one shows you a garden that is a riot of color do you belittle every flower with less than a ten letter name?

There are garden snobs in Colorado, and in Denver, because I've had them in my garden. I'll admit that they are usually not true gardeners and probably don't read **THE GREEN THUMB** anyway (I found very few on the garden tours last summer) but they *are* around.

Maybe you are aghast at anyone growing Yarrow, or Milfoil (*Achillea millefolium*) in a garden, but maybe you overlooked the beautiful leaves early in the spring when you're out yearning for the early bulbs to open. The flowers arrive early and in the red they look like something from grandmother's calico quilt.

Do you refuse to grow Phlox because they spread? You know, they'll

carry your garden through the most difficult part of the summer and ask little in return. Keep the faded blossoms cut and you will avoid the faded seedlings that crowd out the original plant—and have much less "spreading". You'll still need to cut back the clumps every few years but you can work out that crusading spirit on the extra Phlox. (They're much easier to reform than your family.) The tall varieties will grow in the background crowded among other flowers and the new colors are truly beautiful. Try the new whites to bring your garden to life at night, the red in the most distant part of your border for violent color the whole group because they are most rewarding.

But, of course, you're not a snob and those spreading plants are real garden budget savers. Most gardens must have repetition to be truly attractive and it is much easier on the pocket book to divide a clump here and there and plant it elsewhere. Then use the money you saved for one of those exotic plants and use it like jewelry—to set off your garden for a day or two—or just to make you feel like a true horticulturist!



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 That standard rose a day too soon;  
 Who are quite rude to men who sell  
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 —From "Green Fingers" by Reginald Arkell, (Dodd, Mead & Co.)

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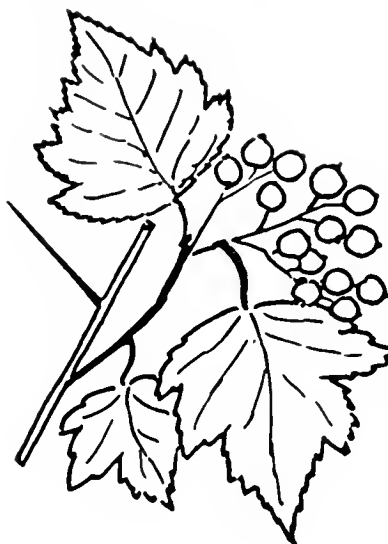
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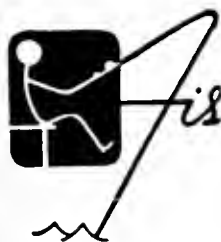
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## GARDENING TO BE DONE IN FEBRUARY

**P**LANNING must still take first place in the program for this month. You can begin to get down to details now. Decide just what new plants or material or work is needed and make arrangements with seed or nursery or landscape firm to carry out your wishes when the weather is suitable. Get catalogs and study estimates.

This is a good time to check all the garden tools. Have the lawnmower sharpened and adjusted, put new handles in the shovels and hoes if they have been damaged, order repairs for the sprayer and have the garden tractor overhauled. Look over the assortment of new garden tools in your local seed or garden supply store.

Inspect the stored bulbs to see that they are not too dry, too wet or too warm. Check over the house plants again for the first signs of chewing, sucking or scale insects. Some gardeners like to start their begonia tubers now.

If you like to start a few seeds in the house, now is the time to get your flats, hotbeds, heating cable, soil and such things ready. In sowing seeds plan on about 6 weeks time for such fast growing things as tomatoes, petunias and zinnas. Some perennials and slow-growing things may be planted almost any time now.

Any warm spells, when the frost goes out of the soil for a few days, is a good time to begin preparing the soil for any later plantings. Work in all the peat, compost, leafmold or manure that the soil will stand. Leave the surface rough to hold later snow and rain.

The dormant lime-sulphur spray for the control of diseases and pests of evergreens is becoming more and more important. Make arrangements with your tree and spray man now so that he can get the work done when the weather is favorable.

This is the time when most good gardeners prune their grapes. Cut out all weak wood, thin the stems to about a foot apart and head back new growth to about 9 buds. Any other emergency trimming on trees and shrubs can be done now. Leave the extensive shrub trimming until after bloom and do no more than necessary to trees that bleed like maple, birch and walnut.

### IRRIGATED AND PLAINS AREAS

Do not be in a hurry to uncover things for spring. There will be some of our worst weather yet, before we have really settled spring. Just check that there are no heavy mats of leaves which are choking out patches of grass or bending down valuable plants.

Check the moisture in the soil and if lacking add now whenever the frost is out so that the soil will be in good condition for spring planting.

Start now to clean up for spring. Do not rake off all the leaves and mulch but take off the ragged stems and rubbish that has blown in over winter.

Some years there will be weeks in February when the frost is out of the ground and it is dry enough to work. Take advantage of these periods to get the needed transplanting done.

### MOUNTAIN AREAS

Things will be rather dormant yet and in normal seasons the snow will protect all low plants. Check for snow damage. Have all plans made to work fast when the frost is finally out.





March, 1952

# *The Green Thumb*

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# The Green Thumb

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Vol. 9

MARCH, 1952

No. 3

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**MEMBERSHIP:** To be announced later. Incomplete.

**BENEFITS:** Mrs. A. L. Barbour, Chairman, Mrs. Hugh Catherwood, Mrs. Winifred Pinkett, Mrs. Richard Davis, Mrs. John C. Mitchell, Mrs. Harold Klock, Mrs. George Garrey, Mrs. Paul Hastings, Mrs. Sue Johnson, Mrs. Edmund Leet, Mrs. James J. Waring; Earl Sinnamon, Chairman, Plant Auction, Clair Robinson, George Amidon, John Swingle.

**EXECUTIVE:** All officers.

**ARBORETUM AND BOTANICAL AREAS:** Mrs. George H. Garrey, Chairman, D. M. Abbott, Mrs. C. Walter Allen, George A. Carlson, S. R. DeBoer, Mrs. John Evans, Mrs. Helen Fowler, Wm. E. Gunesch, Milton J. Keegan, George W. Kelly, Wm. Lucking, Mrs. Hudson Moore, Jr., Robert E. More, Robert J. Niedrach, Mrs. Everett Parker, M. Walter Pesman, Dr. Moras L. Shubert, Julia Jane Silverstein, Dr. Wm. Weber, Mrs. Hubert Work.

**ROADSIDE IMPROVEMENT AND STATE PARKS:** Russell James, Chairman, Mrs. Charles Enos, Co-Chairman, Harold Lathrop, Consultant, Leonard Aitken, Mrs. C. Walter Allen, Harold F. Collins, Wm. Greim, Wm. A. Grelle, Mrs. E. H. Honnen, Sam Huddleston, Mrs. Frank Neal, D. S. Nordwall, Mrs. J. Churchill Owen, A. F. Perlman, M. Walter Pesman, Dr. Moras L. Shubert, Chas. Shumate, Mrs. James Waring, Dr. Wm. Weber, W. M. Williams, Everett J. Lee.

**EDUCATION:** George W. Kelly, Chairman, Paul Morrow, Earl Sinnamon, John Swingle.

**CONSERVATION AND FOREST MANAGEMENT:** Dr. Moras L. Shubert, Chairman, Fred R. Johnson, Arthur L. Nelson, Frank Blankenship, Sam Detweiler, T. E. Drohan.

**PROGRAMS:** Herbert Gundell, Chairman, Mrs. Moras L. Shubert, Mrs. Ralph Hill, George W. Kelly, Mrs. Helen Zeiner, Robert Ewalt.

**OUTDOOR ACTIVITIES:** Mrs. Anna Timm, Chairman, Mrs. Sue Johnson, George W. Kelly, Marjorie Shepherd, Sylvia Stephens, Mrs. Doris Weith.

**PUBLICITY:** Mrs. H. M. Kingery, Chairman, Mrs. Vella Hood Conrad, Mrs. Ralph Rickenbaugh, L. C. Shoemaker.

**PUBLICATIONS:** George W. Kelly, Chairman, Mrs. G. R. Marriage, Mrs. Claire Norton, Robert O'Donnell, M. Walter Pesman.

**LIBRARY:** Mrs. Helen Fowler, Chairman, Helen Phipps Bromfield, Co-Chairman, Mrs. Karl Arndt, Mrs. James Ray Arneill, Jr., Mrs. Jack Bartholomew, Mrs. George B. Berger, Jr., Mrs. Charles Burkhardt, Mrs. Lewis A. Dick, Mrs. Montgomery Dorsey, Mrs. Eric Douglas, Mrs. George D. Ellis, Mrs. B. C. Essig, Mrs. Wallin G. Foster, Mrs. Thornton Fuller, Mrs. George Garrey, Mrs. Sanford Gregory, Mrs. Thomas W. Henritze, Mrs. J. G. Holland, Mrs. W. S. Iliff, Mrs. Arthur L. Johnson, Mrs. Mason A. Lewis, Mrs. John C. Long, Mrs. Frank McLister, Mrs. Hudson Moore, Jr., Mrs. Kenneth Sawyer, Mrs. D. D. Sturgeon, Mrs. James J. Waring, Mrs. J. Kernan Wechbaugh, Mrs. Scott Wilmore.

**HERBARIUM:** Mrs. E. R. Kalmbach, Chairman, Mrs. Edward Bahm, Mrs. J. R. Ballinger, Mrs. G. H. Forcade, Mrs. G. H. Grinstead, Mrs. R. H. Hughes, Mrs. J. W. Newman, Miss Alice Quinn.

**HOUSE:** Mrs. John Evans, Chairman, Mrs. Wallin Foster, Co-Chairman, Mrs. Helen Fowler, Mrs. E. R. Kalmbach, Mrs. Frank McLister.

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## ATTEND THE CONFERENCE MARCH 25-26

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Colorado Forestry and Horticulture Association

Organized in 1884

"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."

OFFICERS

President.....Fred R. Johnson  
Honorary President.....Mrs. John Evans  
Vice-Presidents—Mrs. A. L. Barbour, Mrs. Robert M. Perry, Mrs. Geo. H. Garrey, Milton J. Keegan, S. R. DeBoer, Dr. Moras Shubert.  
Secretary-Treasurer .....Mildred Cook  
Editor.....George W. Kelly

MARCH SCHEDULE

- Mar. 2, Sunday. Jarr Canyon-Indian Creek Area, wildflower trip. Leave Horticulture House 8 a.m. This is a very interesting country even without flowers. Wear suitable clothes and bring lunch.
- Mar. 9, Sunday. Snowshoe trip to South Boulder Creek from East Portal via Rollinsville. Leave Horticulture House 8 a.m.
- Mar. 13, Thursday evening, 8 p.m., at Horticulture House. Monthly meeting of the Denver Rose Society. All those interested in roses welcome.
- Mar. 20, Thursday evening, 8 p.m., at Horticulture House. Mr. M. Walter Pesman will talk on "What a Landscape Architect Saw in Mexico." This will be illustrated with beautiful colored slides taken on this trip.
- Mar. 23, Sunday. Trip to the old ghost town of Lamertine to travel by snowshoe, ski or foot depending on weather. Call for more particulars.
- April 6, Sunday. Trip to the beautiful Red Rocks-Hogback country north of Plainview. There should be flowers and the rocks are always beautiful.

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Term expiring in 1953

George A. Carlson.....Park Superintendent  
Mrs. E. R. Kalmbach.....Botanist  
Robert E. More.....Lawyer and Evergreen Specialist  
M. Walter Pesman.....Landscape Architect  
Dr. Moras Shubert.....Botany Dept. Denver Univ.  
Mrs. James Waring.....Home Gardener  
Mrs. J. Kernan Weckbaugh.....Home Gardener  
Scott Wilmore.....W. W. Wilmore Nurseries  
Robert Ewalt.....Home Gardener

Term expiring in 1954

S. R. DeBoer.....Landscape Architect  
Mrs. George H. Garrey.....Home Gardener  
Fred R. Johnson.....U. S. Forest Service, Retired  
Milton J. Keegan.....Lawyer  
L. C. Shoemaker.....Retired Forester  
John Swingle .....Arboriculturist  
Le Moine Bechtold.....Merchant, Plant Breeder  
Herbert Gundell.....County Agricultural Agent  
Armin Barteldes .....Seedsman

Term expiring in 1955

Mrs. A. L. Barbour.....Forester  
Mrs. Helen Fowler.....Shadow Valley Gardens  
George W. Kelly.....Horticulturist  
Mrs. Frank McLister.....Home Gardener  
Mrs. Robert Perry.....Home Gardener  
Earl Sinnamon .....Arboriculturist  
William Lucking .....Horticulturist  
Paul N. Morrow.....Landscape Gardener  
Mrs. John Evans.....Home Gardener

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# IMAGINATION AND KNOW-HOW

## *A Garden Room*

By FREDA G. DOUGLAS

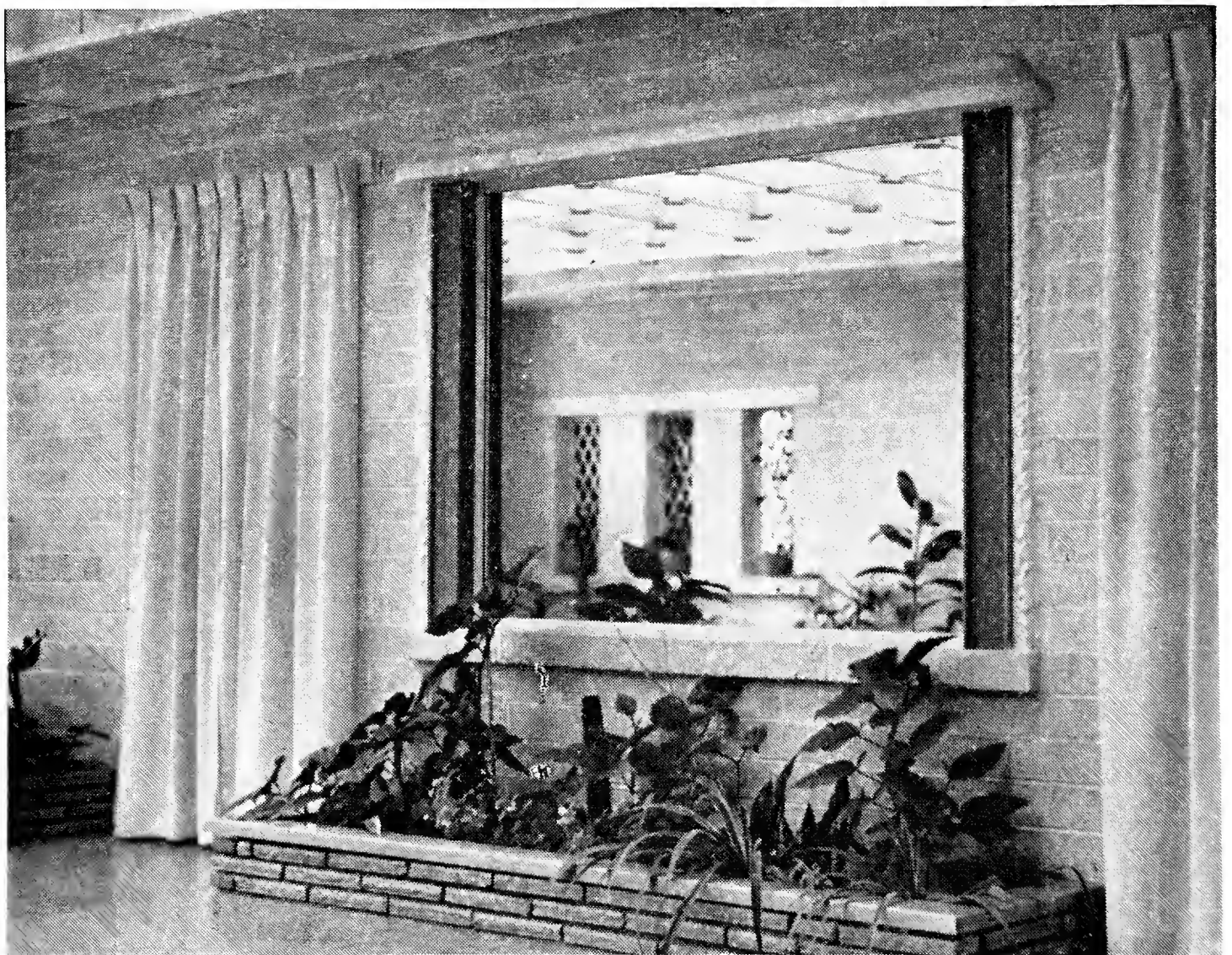
UNTIL a recent visit to the home of Mr. and Mrs. Lewis Smith, 2000 South Madison Street, Denver, Colorado, I never would have dreamed that all-year gardening was possible in Colorado without the use of a greenhouse. Mr. and Mrs. Smith have achieved this miracle by creating a living-dining-garden room in their home.

Mr. Smith tells me that he first got the idea for the indoor garden in Saudi Arabia where the landscape is so bleak one has to play "God" and create living beauty within the four walls of the home.

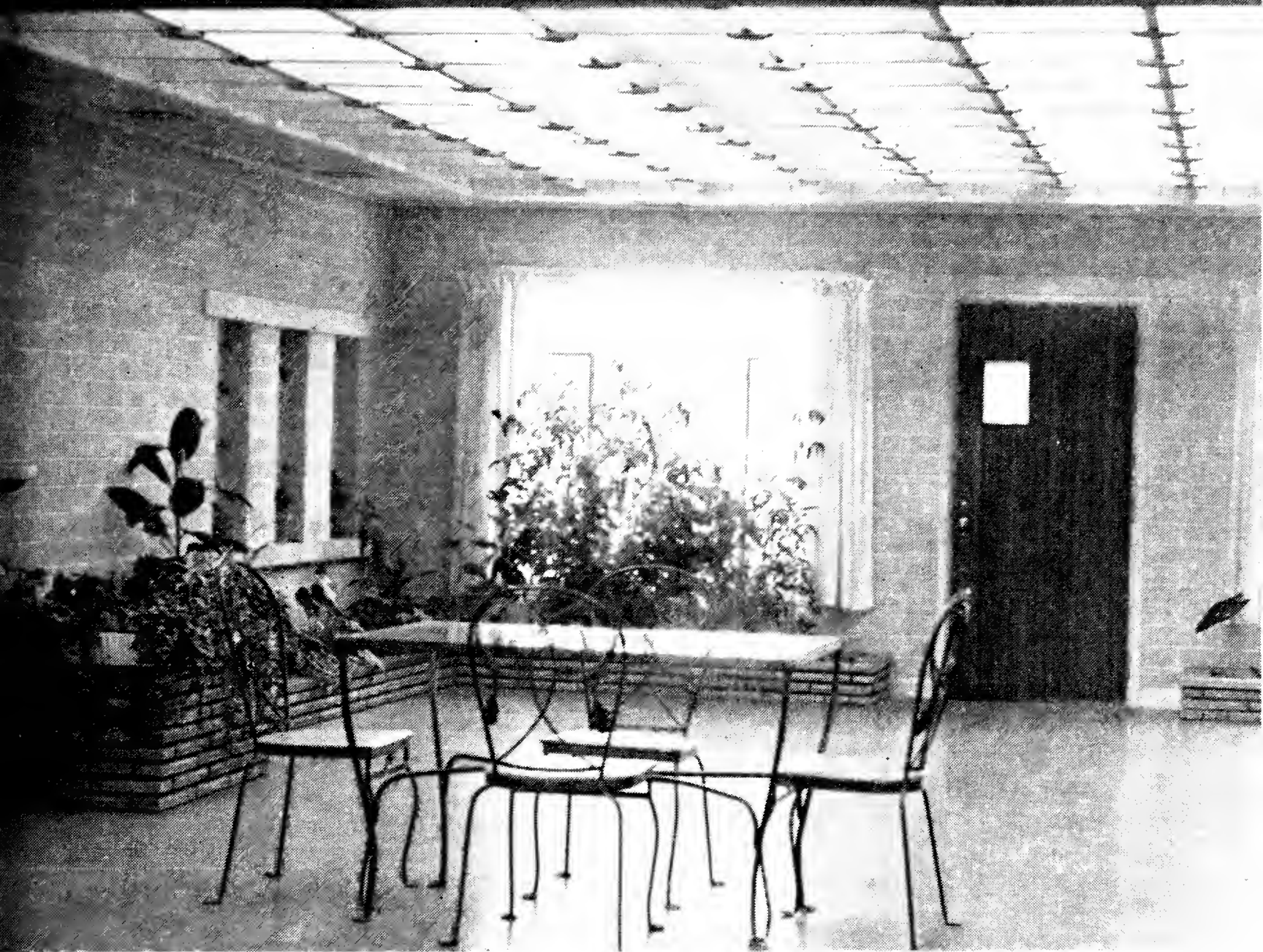
By a garden, I mean plants planted in soil, not in pots, plus a garden plan. At the present moment the

plant material is mainly sub-tropical, which makes a lush green background for a variety of supplemental plantings at various times of the year. Many types of ivy crawl over the brick walls from floor to ceiling and a fountain pool on one wall is reflected by a mirror on the opposite wall creating an illusion of further delightful vistas beyond.

A partial list of the plant material in use follows: Nephthytis, Aglaonema, Diffenbachia, Various Ferns, Tolmiea, Sanseveria Oleander, Fig, Acacia, Philodendron, Variegated Ivy, African Violet, Rex Begonia, Star Begonia, Dracaena, and many others. Mrs. Smith tells us that last summer she raised tomato plants with







red Geraniums at their feet which must have been a gay sight indeed.

The possibilities are limitless and I have visions of the Smiths dining, surrounded by Tulips, Hyacinths, and Daffodils this spring, with perhaps Tuberous-rooted Begonias next summer.

I have tried to convey some sense of the imagination involved in this project and the know-how follows written by Mr. Smith himself.

### **NOTES ON STRUCTURE OF GARDEN ROOM**

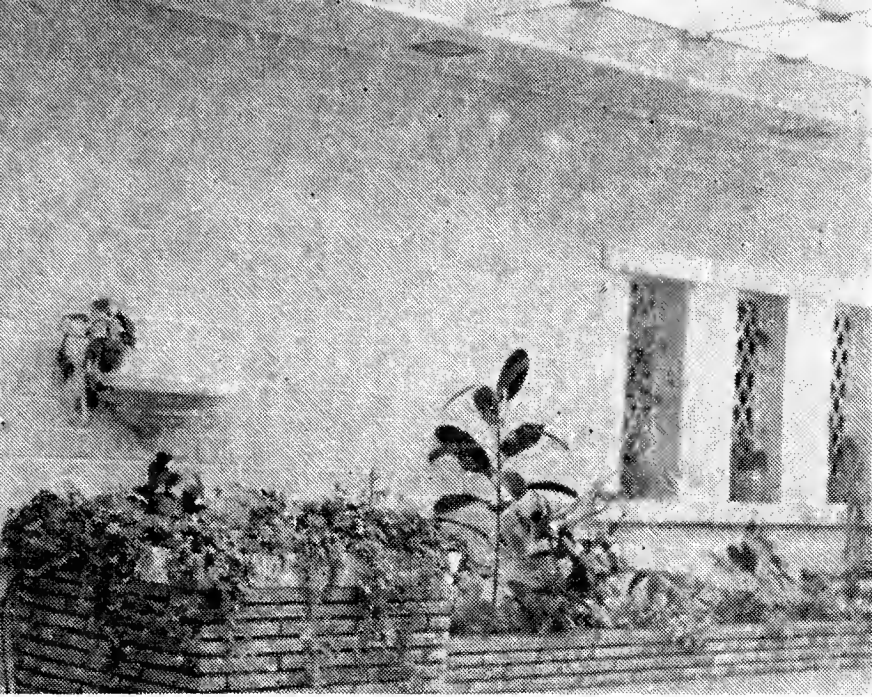
LEWIS G. SMITH

The garden room has a vaulted ceiling containing twelve skylights, each double glazed, with upper glazing of hail-proof plastic; and lower glazing of light-diffusing, amber-colored cathedral glass. At the normal ceiling level there is an open-grid

frame, or "egg-crate" which creates the effect of openness and generally obscures the vaulted ceiling except when viewed from directly underneath. Reflectors placed between the upper and lower glazings of each skylight enable more light to be captured, with the result that, at noon, even the north side of the south wall is aglow with light. Full night lighting is achieved by three inverted spotlights directed at the vaulted ceiling, and by ten recessed lights placed around the grid border and beamed directly onto the plants. Two spotlights shining downward from the grid give concentrated lighting for the dining table.

The room walls are of 4"x8"x16" volcanic ash blocks which present a pleasing texture when painted, and offer good sound absorption. The floor is a 5-inch concrete slab, covered





with soft-tone asphalt tile, the surface of which allows carefree watering and handling of the plants. A hose tap, concealed within a wall fountain, reduces watering to a simple operation.

All planters have water-proofed concrete sides and bottoms so as to prevent moisture from seeping to the underside of the concrete floor slab. Each planter box drains to a dry-well outside. Drainage is provided by first placing 4 inches of 2-inch rock, then a 3-inch layer of pea gravel, next a 3-inch layer of sand and, finally, about 8 inches of soil for the plants. Drainage of this sort is essential to prevent the planters from becoming sour.

Heating by hot-water coils in the concrete floor slab makes an ideal solution of the heat problem where heat is desired at the plant level. No coils pass within the planters however, since sufficient heat for the soil is obtained by conduction through the concrete walls.

While one might suspect that with skylights the room temperatures would become excessive in summer, the high

vaulted ceiling enables any warmer air to collect well above head level, and a ventilator located above the plane of the grid frame enables the warm air to be drawn off. Conversely, considerable welcomed solar heat is gained through the skylights in cold weather.

The roof design is so arranged that these skylights are rarely visible from outside, yet are readily accessible for cleaning when necessary.

## A SPECIAL GROUND COVER FOR USE IN THE SUN

THE DWARF LACE PLANT  
(*Polygonum reyneutria*)

We feel so satisfied for what Myrtle does for us in certain shade areas. Gardeners have long been looking for a dwarf plant with much the same habit and to produce the same effects as *Vinca minor* but for use in the sun. This Dwarf Lace Plant has the same value in the garden as Myrtle. There is none of the ground covers, listed in the entire compendium attached, which presents the constant beauty of the Dwarf Lace Plant.

Not so long ago Amos Perry, one of the greatest of British plantsmen, introduced this plant into England. We like it here, for this Rocky Mountain region, because of its easy growth. It is very hardy. Its height is just what we look for in this kind of a ground cover and a few plants fill open spaces rapidly. Its attractive pale-green foliage in summer becomes an impassioned red in the autumn. When the first buds appear—a combination of coral and salmon—one might think these buds the plant's chief charm, but its very special fascination is revealed when, in the fall, it unfurls airy sprays of flowers, in pink, of the style of the white silver lace vine.

Many uses will be found for this magnificent ground cover. It makes a perfect picture near a pool, among rocks in the sun.—HELEN FOWLER.



## ANNUAL MEETING AND DINNER

THE annual meeting and dinner of the Association was separated this year from the Rocky Mountain Horticulture Conference, for that conference could not be held until late March. We secured excellent accommodations in the new auditorium of the A.A.U.W. at 14th and Josephine Street. The date was January 24, 1952. 148 people attended.

Clarence Moore very kindly consented to act as toastmaster for the occasion and his wit and humor added greatly to the occasion. Mrs. Erne Shubert was general chairman of arrangements and did a grand job in coordinating all the small and large details that go to make up a successful program of this sort. Mrs. George Garrey took over the responsibility of arranging the decorations and she enlisted Mr. and Mrs. Bill Gunesch, Bill Gillis, Mrs. S. R. DeBoer, Mrs. Sue Johnson, Mrs. Earl Davis, Mrs. Bill Lucking and Miss Alice Quinn to help. Bill Gunesch, Bill Gillis and Mrs. L. B. Shelby all donated plants which were used to decorate and to allow a small potted plant at each place. Each one tried to identify the plant by his plate and failing to do so he was asked to slip 25c into the pig for the Helen Fowler Library. This was a lot of fun and educational.

Mrs. Charlotte Barbour conducted the business meeting and read the report of the retiring president, Mrs. John Evans. She also read the membership and financial report and called on Mr. Pesman to give the report of the nominating committee for new directors. These were voted in and retired to select the new officers for the coming year. Then Mrs. Kalmbach was called to report on these new officers. Fred R. Johnson the

newly elected president then gave a short talk outlining the objectives of the association for the coming year. Copies of these reports are all given in this issue.

Robert E. More gave a glowing tribute to Mrs. John Evans and moved that she be made an honorary president. Mrs. George Garrey volunteered to wire Mrs. Evans expressing our appreciation for her long and valuable service as president and telling her how much we all missed her at this annual meeting.

While the directors were out selecting the new officers, Mrs. J. R. Ballinger conducted a few minutes of inspirational group singing. Following the business and reports Dr. Moras Shubert showed a thought-provoking film entitled, "Man in the 20th Century," and this was followed by a pictorial review of the past year's activities shown in ektachrome slides by horticulturist George W. Kelly.

These pictures graphically showed what the Association is doing to combat the increasing tensions and problems of modern civilization and help make the community and the world a little better place in which to live.

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### LIBRARY DONORS

Virginia Clarke Sweet, 3600 E. 7th Ave., Denver

Mrs. George H. Garrey, 1300 E. 7th Ave., Denver

Mr. William E. Gunesch, 5800 W. 41st Ave., Denver

The Green Thumb Council (Publishers of "Rocky Mountain Horticulture Is Different, Geo. Kelly's Garden Book")

William V. Gillis, 51 S. Knox Ct.

Mrs. L. B. Shelby, 5051 Utica

## PRESIDENT'S REPORT FOR 1951

By GLADYS C. EVANS

IT gives me much pleasure to give my report to our members at this 68th Annual meeting of the Colorado Forestry and Horticulture Association, and I wish I might be with you in person.

The year 1951 has been one of continuing service in our field—and the carrying on of our objectives—more and more are garden-minded persons asking answers to their garden problems and these are given at Horticulture House and through the pages of the Green Thumb.

There have been meetings of many different horticulture groups at Horticulture House—and interesting and instructive programs have been arranged, with outstanding speakers by Mrs. Shubert our able chairman.

Many new books have been added to the Helen Fowler library, these have been chosen by Mrs. Fowler, and donated by numerous friends who are interested in building this fine horticultural library. Miss Alice Quinn, our librarian, has catalogued the books and placed in each the Library's book plate—with the donor's name.

Mrs. Kalmbach, chairman, and members of her Herbarium Committee are continually adding to the collection—some of these will be shown at the Rocky Mountain Horticulture Conference in March, so be sure to see them.

Mrs. Helen Fowler, chairman of the Membership Committee, began her year by giving a delightful tea at Horticulture House for those who were serving on her committee. The results which this membership committee are having must be gratifying and pay them well for all the time and effort each one has given. We

now have 143 new members and with our renewals a total of 2,458—our goal of 5,000 still is a long way off—so please everybody help to bring in new members.

Mr. S. R. DeBoer made a very fine contribution by preparing plans for small gardens, to be given to new members, who will call at Horticulture House for them.

The Benefits Committee, with Mrs. Barbour as chairman and Mrs. Winifred Pinkett as co-chairman, have "gone to town"—with their "Antiques and Horribles Auction" in the spring, netting \$947.72.

In October the Plant Sale on the Civic Center was held and material was donated by the nurserymen. In spite of the very cold day which prevented a large attendance, \$378.57 was made for the Association.

The "Look and Learn" Garden Tours brought in to the Association \$392.22. Many charming and interesting gardens were shown and I hope we may have other garden tours next summer.

The Green Thumb, so ably edited by our Horticulturist, Mr. George Kelly, is continually becoming more interesting, and helpful to gardeners in this Rocky Mountain area. Mr. Kelly has received several letters of commendation from national groups such as the Massachusetts Horticultural Society and the National Horticultural Council.

George Kelly's book "ROCKY MOUNTAIN HORTICULTURE IS DIFFERENT" is a "must" to gardeners in this area. It is now in its second printing and over 4500 copies have been sold.

The Radio garden programs given by George Kelly and Don Peach over

KOA on Saturday mornings are enjoyed by all listeners.

The Conservation Committee has co-operated with the Federated Garden Clubs in carrying on the Blue Star Highway.

A project for conservation and reforestation is being considered by the Association for the coming year.

The Outdoor Activities Committee, with Mrs. Timm as chairman, have taken many groups on instructive and delightful trips. This evening you will see pictures of some of the places they have been. Mrs. Timm is a wonderful person to lead these trips and the participants do not lack

for "Fur and Food"—many thanks to Mrs. Timm.

The Botanical Gardens Foundation of Denver, Inc., held an organization meeting in February of last year but as yet no agreement with the city has been concluded.

Mr. S. R. DeBoer has created a beautiful plan for the area surrounding the Natural History Museum in City Park, when the first botanical planting and labeling will be done.

I want to thank most sincerely our many friends who have volunteered services upon committees, our Committee chairmen, our officers, directors and staff, for their fine co-operation during the past year.

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## OBJECTIVES OF THE ASSOCIATION

By FRED R. JOHNSON

Our New President, As Presented at Annual Meeting

Members of the Association and Friends:

I feel that this is a call to service. I feel humble following someone who has meant so much to the Association and Denver. The committee came to me with their offer of the Presidency after Mrs. Evans, having given eight years' service, felt she had done her duty. At first I demurred, but after they outlined the proposal I felt I could not turn it down. I said I would serve provided the other leaders would continue.

Mrs. Evans contributed much to the Association; time, energy, prestige, her ability in getting volunteers and financial aid. She was first elected in February, 1944. The Association once had temporary offices at 1609 Broadway. Mrs. Evans saw the need for what she had in mind and acquired an old building at 1355 Bannock Street which was remodeled into the fine quarters we have at the pres-

ent time. Her interest in the Association was not casual, there was a deep seated conservation interest in her family. Old records of the Association carry the names: Col. Edgar T. Ensign, Gen. Wm. J. Palmer, Frederick J. Ebert, Wm. N. Byers, Moses Hallett, E. M. Ammons, Capt. E. L. Berthoud, Gov. Alva Adams, W. G. M. Stone, Dr. John Grass, Lou D. Sweet, Ellsworth Bethel, P. L. Clark, C. R. Root, A. Lincoln Fellows and Walter Cheesman (Mrs. Evans' father). In old Forest Service Records (1901-02), a petition to Congress, asking that lands on the Clear Creek drainage be added to the Pike National Forest because of their watershed value; was signed by Mr. William G. Evans and Miss Anne Evans, father and aunt of Mr. John Evans.

We owe a debt of gratitude to Mrs. Evans. Her interest and support will be continued. She has volun-



teered to serve as chairman of the House Committee, Directors, and Honorary President.

We must appraise the Association's value to the community and what it has to offer. If we are merely a glorified garden club, there is no reason for its existence. Small garden groups of men and women are more practical as garden clubs than the Association. The Association with its larger membership and facilities can coordinate and supplement activities of the Garden Clubs. For example: the Green Thumb, best in gardening and horticulture; professional service available at Horticulture House; radio programs, with the best talent from many Garden Clubs; a library of 1500 volumes, and an herbarium of 1600 specimens.

These are some of the objectives of the Association in line with those outlined in the articles of incorporation:

1. ARBORETUM. Started on project in 1944. It should function as Denver Museum of Natural History, serving the Rocky Mountain Region as the Morton Arboretum serves the Midwest.

2. The Association should take a more active part in the preservation of the natural beauties of Colorado. I have noted the changes in the State in the past forty years. We cannot stop the wheels of progress and the era of industrialization through which we are passing. There is need for an organization with an appreciation for scenic, aesthetic and recreation values, to act as a check on engineers and industrialists who too often see water only for its value for power and irrigation; who think of fish as needing only water for their existence and ignore biotic conditions which fish must have to thrive. I refer, of course, to multiplicity of diversion tunnels and dams and reservoirs pro-

posed, drying up of some stream beds and gouging out of other channels. The Association can point out other values — Recreation is second only to Agriculture in its returns to the state. The Association can act as a balance wheel between over-enthusiastic engineers and over-enthusiastic conservation crusaders. Dinosaur National Monument and Echo Park Dam are examples.

3. LEGISLATION providing for State Parks. We have National and State Parks in the mountains, but these should be supplemented by establishment of smaller areas in the eastern part of the state and along main highways where the traveler can stop for rest. These might be natural groves, but that is not essential as evidenced by the work of M. Walter Pesman with the State Highway Department. Colorado is the only State without State Parks. A Bill was introduced in the 1951 session but it got nowhere.

4. ENACTMENT OF LEGISLATION providing for the harvest of trees on privately owned lands in accordance with good forestry. Example: Christmas tree cutting in some parts of the mountains has resulted in despoilation. The Bill introduced in the 1951 session got nowhere. Mr. George Kelly has crusaded for legislation along these lines. Christmas tree tags are even on trees imported from other states, but there is nothing to indicate how such trees were cut.

5. A CONSERVATION project for the Association: there has been some preliminary work done such as inspection of State owned land, some in bad condition. State Engineer of the Land Board Mr. Milborn and State Forester E. J. Lee are cooperative. We propose to rehabilitate a small tract of state owned land to serve as an example of good land



management; to be a cooperative project of the Association, State Land Board, and Soil Conservation Service.

**CHALLENGE:** It is an honor to be an officer and director and it is also a responsibility. A working Board is necessary. Every member will be asked to serve in some capacity. I will call a meeting of the Executive Committee in a few days to line up committees and then present suggestions to the Board. An invitation is extended to all members of the Association to participate. Indicate your interests to the Secretary

for use of the Executive Committee.

The Association has done well, in fact, so well that others are taking credit. Regardless of this, there is great opportunity for the Association. It can do as much good along lines of objectives outlined in the articles of incorporation as the Museum of Natural History and the Art Museum are doing along their lines. I ask your cooperation, so that the Association may continue to be as successful in the future as it has been during the past eight years of Mrs. Evans' regime.

**FINANCIAL AND MEMBERSHIP REPORT FOR 1951**

Net worth, as of January 1, 1951.....	\$3,076.32
INCOME FOR THE YEAR:	
Memberships and dues.....	\$ 9,223.72
Advertising in Green Thumb.....	3,034.45
Donations .....	5,835.50
Benefits and miscellaneous income.....	2,045.45
<hr/>	
Total income .....	\$20,139.12
EXPENSES	
Printing Green Thumb.....	\$8,070.47
Salaries, Horticulture House, Office, Advertising, Etc. ....	9,800.91      17,871.38
<hr/>	
Increase in net worth for the year 1951.....	2,267.74
Net worth as of December 31, 1951.....	\$5,344.06
MEMBERSHIP	
January 1, 1951.....	2,357 members
December 31, 1951.....	2,458 members
An increase of.....	101 members

**LOOK AND LEARN GARDEN TOURS**

Plans are under way for another series of Look and Learn Garden Tours this summer. We hope to make these as good as the ones last year which met with such favor.

We will have the same two people in charge that were in charge last year, Mrs. Paul L. Hastings as chairman and Mrs. Sue Johnson as co-chairman, and with the addition of Mrs. Edmund Leet as co-co-chairman.

We really need the help of each Green Thumb member in finding gardens that are suitable. Please call any of the committee members if you'd like to see your garden or the garden of a friends listed this year.

Mrs. Hastings, DE. 9300; Mrs. Johnson, TA 3410; Mrs. Leet, FL. 0810.

**Attend the Rocky Mountain  
Horticultural Conference  
March 25-26**

## WHAT THE PLANTS ARE TALKING ABOUT

*Translated from German*

By INJA SCHOO.

HIGH up in the sky the giant trees, the tall and massive ones, were shaking their mighty heads and there was a great rustling in the air. This is what they were saying. "Look at this insignificant small fry below, the grasses, the herbs and the grain bearing plants. They are unable to lift themselves up from the earth, but cling to her as a small child to the dress of its mother. They have not yet understood how to develop firmness and flexible sturdiness and before the year has passed they will be wilted and shrink to the earth.

"We, however, have since time immemorial, worked and built, found means and ways to withstand the violent winds and striven to meet the light and the sun. A strong frame have we built and strong support give we to our leaves. Thousands and thousands of thin stems, each one alone weak and helpless, have we put together as dense wood, thousands and thousands of stems, each alone short, restricted in growth, have we piled up to a high trunk. Now, we sway unconcerned in the storms and accompany it with mighty songs. Older are we than the animals, which rest in our shade, older are we than the human people who use our wood for their buildings. We are for certain, the oldest, the most steadfast beings of the entire world. As a big army, we march over the surface of the earth. No one can hold us back and that small-fry, those completely insignificant plants of the prairies and the fields—our shadow is enough to frighten and destroy them."

Then, the grasses, the herbs and the grain-bearing plants shook with laugh-

ter and responded with immeasurable joy. "Ha! Listen to what those giants, the long armed, the pot-bellied and towering heroes of ancient times have to say. Always are they showing off, how old they are, how long they have built, and how big an army they make; and they do not see at all, that we, who do not develop big chunks of wood, grow up in only one year and know how to fulfill our lives in that short span of time. They do not know what merry folks we are, full of life and happiness, how we try to use all colors and shapes and invent new ones. We dance and chat in the sun and do not even try to withstand the winter with angry faces and cold feet. In the spring we jump quickly from our hiding places and send out every kind of colorful flowers. Then come the children and sing and yell, dance and hop around in the fields. The little girls pick our flowers, they gather them in nice bunches, and bind garlands which they show to their mothers. In the fall our time is finished. That is when the people come and harvest the seed which we have matured, calling it a blessing.

"You, tree giants, think that you are building a mighty invincible army? There comes a day with not the slightest trace of wind, a real quiet, hot summer day and slowly comes the evening. With the darkness come ash-gray clouds, with the clouds a sudden blast of wind and heavy rain drops. Then out of the sky sharp lightning strikes; a crash of thunder is heard—again it is quiet. But look at that tower-like tree. Its head shakes, small clouds surround it, flames start to leap, and already the wild fire flares. Where is the forest now, that in-

vincible army? The next day, black solitude, dark, sad trunks are all that is left and only we, the little, insignificant ones, who are never touched by lightning, we shall in the shortest possible time put new life in that place of misery."

Far away in the desert the cactus plants have heard the rustling of the tree giants and the chatting of the small-fry. Not without sadness did they think, "We stand here all alone in the desert, away from the giants and the merry grasses. Voices we do not have. We can neither rustle like the giants, nor can we chat like the happy folks, we the fat and round ones. So radiant has the sun been shining down on us, so little milk have we received from the udders in the sky, that our lives became very heavy, and again and again we felt near the end. That is why we drew ourselves completely within. First went our feet, then our arms and finally also our head sank deep between our shoulders. Our voices we have lost, and as globes or columns we stand here, voiceless in the desert.

"But one thing we have learned. When everything dies in the glowing and smothering desert, we live on and know how, out of the boiling sand and burning stone, to get the last, the best drop of water. From that drop of water we weave the colorful dresses for flowers and give them sweet and wonderful scents. And when the people stand still in surprise and say, 'Look at those odd, those very strange plants, those columns and globes, those spines and daggers, how wonderful is the color of their flowers, how sweet and delicate their scent', that is when we are happy—our flowers radiate and our scent blows softly over the Earth, like a longing desire."

And now I ask you, little daughter, and I would like to know which of those plants you like best—the mighty

tree giants, the towering ones who sing with the violent storms; the merry population of the fields, the grasses and the herbs; or the cactus plants with their beautiful flowers?

I do not think we could omit any of them on the wide surface of the earth—not the giants who form the shady forests, not the small-fry and all the colorful children of the meadows, not the cactus plants, the silent balls of the desert with their delicate colors and sweet scents. In a rich and wonderful variety, they all take part in the same eternal life.

This was a letter from a father in the New World to his little daughter in the Old World. It tried to give an answer—and gave good help—in some questions about life, the kind and hard life.

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### REPAIR STORM-DAMAGED TREES

from Tree A-B-C's—Shade Tree Digest

Dr. Ray R. Hirt, pathologist, New York State College of Forestry, Syracuse, N. Y., writing in *Horticulture* magazine, says, "Wind-damaged trees present unusual problems. Wounds need to be shaped up; jagged silvery wood ought to be smoothed; branch stubs must be removed; weakened and split crotches should be strengthened; cables may need to be installed; twisted branches will require particular attention, and proper amounts of suitable fertilizers may be needed. This is not work for an untrained, inexperienced laborer, gardener or other employee. It requires the services of a thoroughly experienced, competent arborist who possesses the proper equipment for such specialized work. Good shade and ornamental trees well placed are valuable assets to any property. To keep such trees in good health and to repair them when they are damaged is a good investment."

## HOW TO SELECT THE RIGHT PLANT FOR EACH SITUATION

By GEORGE W. KELLY

**F**IRST the general plan should be worked out and all the features and effects definitely planned. Then, plants and material should be selected which will most nearly give the effects desired under the circumstances that must be worked with. It must be continually kept in mind that growing conditions here are vastly different from those in the older populated centers of the east where most of the horticultural literature is written.

More attention should be given to selecting plants which will grow to a size and of a character which will give the desired effect for the greatest length of time; yet it must be remembered that plants are living things and so are continually changing—either growing larger or becoming mature or damaged and dying. Sometimes a certain plant may only be expected to give ten or twenty years of service and then should be replaced with a new plant, while some slow growing things may be placed where they may grow and become better each year of their life.

Trees which grow rapidly and eventually become large should not be placed so close together or to buildings or wires that they soon conflict and must be seriously damaged by cutting back. Shrubs may be selected which will soon get to the desired height but will never get too large.

Let us suppose a few typical situations and see how we would go about selecting the right plant. First we will need two parking trees, let us say. We have 75 feet front and no wires near so two trees which eventually grow large would be suitable. In the list of tall trees for street

use we will find the best trees listed. If we have good soil and take care of them we may select from the better but more difficult ones such as Red Oak, Schwedler Maple, or American Linden; but if our soil is poor or alkaline or we know we will have difficulty in watering them we will select from the hardier ones such as Hackberry, Honeylocust or Ash.

Let us suppose then that we need some shrubs for the north side of the house to make a screen between our place and the neighbor's kitchen window. We will select from those in the "tall" list that also are in the list of those that will tolerate shade. Here we will find some of the Mockoranges, Honeysuckles and Viburnums. If a variety of bloom and fall effects are wanted select one or several from each of these groups.

Another situation might be a vine to cover a trellis built to screen the ashpit. We need a hardy vine and one that will grow quickly and will give a screening effect for the greater part of the year. When the list of available vines is studied it will be found the Hall's Japanese Honeysuckle, Virgin's Bower Clematis or Silverlace Vine will come close to filling all these requirements.

Let us suppose that all the various situations called for in the landscape plan are filled this way and one area is left where the soil is good, the sunlight sufficient and the facilities for watering are adequate. Here we may play with some of the borderline, new or questionable things that are advertised in the beautiful catalogs of other areas. If they grow, possibly we will have discovered a new plant and we can crow to all our gardener



friends, and if they do not grow, we can charge it to experience and tell no one about it.

Whenever it is possible, the prospective gardener should arrange trips around to good gardens and parks

with some one who knows the plant materials and can point out the good and bad qualities of each. Learning plant material this way will save many disappointments.

## DECIDUOUS TREES

### Large, Street or Shade, Hardy and Drouth Resistant

Honeylocust—drouth resistant, makes thin shade, sometimes has thorns and pods.

Common Hackberry—very drouth resistant, has few pests, difficult to transplant.

Ash, Green or White—slow growing, has few pests, drouth resistant.

Elm, American and English—easy to grow, has many pests.

Western Catalpa—attractive leaves, pods, and flowers, drops pods and flowers.

Soft Maple — clean medium fast growth, shallow roots, likes Colorado climate unless soil is too alkaline.

### Large, Street or Shade, More Difficult to Grow

Aesculus, Horsechestnut, Ohio and Yellow Buckeye — symmetrical shape, attractive flowers, deep rooted, have few pests.

Kentucky Coffeetree—slow growing, hardy, deep rooted.

Linden, American and European — symmetrical habit of growth, neat, young trees sometimes winterburn.

Black Walnut—needs deep soil, coarse appearing tree.

Bur Oak—hardy, slow growing, most alkali resistant of oaks, no fall color.

Hard Maples, Norway, Schwedler, Sugar and Planetree—slow growing, difficult to transplant, subject to winterburn, good fall color.

Oak, Red, Pin, and English—slow

growing, requires special transplanting care, good fall color.

Sycamore—clean tree, not tolerant of alkali, hard to transplant.

Mulberry — good fruit, subject to some winterkill especially in northern part of state.

Birch, European White, Cutleaf Weeping, Paper—graceful shape, white bark.

Black Cherry—beautiful tree, subject to winterburn.

### Large, Street or Shade, For Difficult Situations in the Mountains or on Plains Only

Plains Poplar or Cottonwood—largest and hardiest of the poplars, spreading shape needs plenty of room and water. Plant only male or cottonless trees.

Narrowleaf Cottonwood — neat upright growth, rapid, will grow in high altitude.

Smoothbark Poplar—intermediate between plains poplar, and narrowleaf poplar.

Balsam Poplar—smaller, more irregular tree for very high altitudes.

Boxelder—tolerant of drouth, alkali, and high altitude, short lived and has serious insect pests.

Siberian (Chinese) Elm—quick growing, drouth resistant, short lived, subject to storm damage.

Willows—quick growing, short lived, rank feeders, easily broken in storms.

Carolina Poplar — should never be planted as a street tree.

Tree of heaven, *Ailanthus* — tolerates drouth, smoke, poor soil, suckers badly.

### Tall and Slim

Poplars, Lombardy, Bolleana, and Chinese—all severely damaged by insects and diseases. (See your nurseryman for recommended new tall and slim trees of other kinds.)

### Small Hardy

Mountain Ash, American and European — neat, upright, attractive fruit in fall.

Flowering Crabapples, Hopa, Eley, Redsilver, Redvein—attractive rose-red flowers, hardy.

Dolga Crabapple—white flowers, attractive and edible red fruit.

Hawthorn, Downy, Colorado and Cockspur—attractive white flowers, red fruit.

Russianolive—very hardy and adaptable, persistent fruit, gray leaves.

Sourcherries—attractive flowers, useful fruit, symmetrical shape.

### Small, More Difficult to Grow

Hawthorns, English and Washington —slow growing, attractive flowers and fruits.

Dwarf Maple, English Hedge and Amur—slow growing, good fall color.

Crabapple, Bechtel — attractive light pink flowers, slow growing, subject to fire blight.

Japanese Pagoda Tree—spreading, attractive flowers and fruits.

Goldenraintree—attractive flowers, and persistent fruit, difficult to start.

Chinese Catalpa—attractive flowers, pods and leaves.

Texas Black Walnut — More rapid growing than black walnut, deep rooted.

Quaking Aspen—white bark, spreading, difficult to transplant.

Siberian Apricot—hardy as a tree, but bloom and fruit unreliable.

### Good Blooming Trees

Crabapples	Plums
Catalpa	Goldenraintree
Cherries	Japanese Tree
Apricots	Lilac
Hawthorns	New Mexican
Mountain Ash	Locust

### Formal Shaped Trees

Buckeye	apple
Mountain Ash	Linden
Horsechestnut	Washington
Bechtel Crab-	Thorn

### Informal Shaped Trees

Catalpa	apple
Apricot	Goldenraintree
Mountain Alder	Japanese Tree
Russianolive	Lilac
Amur Maple	Japanese Pagoda
Redvein Crab-	Tree

### Spreading Trees

Honeylocust	Cockspur Thorn
Plains Cotton-	Kentucky Coffee-
wood	tree
Russianolive	Redvein Crab
American Elm	Jap. Pagoda Tree
Willows	

### Narrow Trees

Mountain Ash	Chinese Catalpa
English Haw-	Smoothbark
thorn	Poplar
Hopa Crab	

### Heavy Shade Trees

Catalpa	Poplars
Linden	

### Light Shade Trees

Honeylocust	Willows
Birch	

### NOTE

The Rocky Mountain Horticultural Conference, March 25-26, will be packed full of valuable information for all gardeners. Registrations, if made in advance will be only \$1.50, a saving of 50c. See the complete program in the February issue.

"Cl." following a name indicates that the plant is a "clon" or horticultural development. "sp." indicates various species

Size	Medium, 3-6' (*Especially useful)	Low, under 3'	Shape	For plains	Irrigated areas, *Borderline	For alt. of 6000-9000'	N. Native	Tolerates shade	Attractive to birds	"Cl." following a name indicates that the plant is a "clon" or horticultural development. "sp." indicates various species	Bloom		Fruit		L. leaves, C. colored Stems, F. fruit Effect	Good fall color	Useful for hedges, C. clippe	I. informal
											Color	Season	Color	Season				

Size	Medium, 3-6'	Low, under 3'	S. spreading	T. tall & slim	For plains	Irrigated areas,*borderline	For alt. of 6000-9000'	N. Native	Tolerates shade	Attractive to birds	S H R U B S									
x	x		S	T	x	x	x	N		x	COLORADO HAWTHORN - Crataegus coloradensis		w	Ma	r	Se	F	x		
x	x		S	T	x	x				x	COCKSPUR HAWTHORN - Crataegus crusgalli		w	Ma	r	Se	F	x		
x	x		S	T	x	x				x	THICKET HAWTHORN - Crataegus intricata		w	Ma	r	Se		x		CI
x	x		S	T	x	x				x	DOWNY HAWTHORN - Crataegus mollis		w	Ma	r	Ag		x		CI
x	x		S	T	x	x				x	ENGLISH HAWTHORN - Crataegus oxyacantha		w	Ma	r	Se		x		
x	x		S	T	x	x				x	PAUL'S SCARLET THORN - Crataegus oxyacantha, Cl.		pk	Ma	r	Se		x		
x	x		S	T	x	x				x	WASHINGTON HAWTHORN - Crataegus phaenopyrum		w	Ma	r	Se		x		
x	x		S	T	x	x				x	RUSSIANOLIVE - Elaeagnus angustifolia		y	Je	w	Se	F			CI
x	x		S	T	x	x				x	WINGED EUONYMUS - Euonymus alatus			Je	r	Se	F	x		CI
x	x		S	T	x	x				x	EASTERN WAHOO - Euonymus atropurpureus			Je	r	Se		x		I
x	x		S	T	x	x				x	EUROPEAN EUONYMUS - Euonymus europaeus				r	Se		x		
x	x		S	T	x	x					COMMON PEARLBUSH - Exochorda racemosa		w	Ma						
x	x		S	T	x	x					APACHEPLUME - Fallugia paradoxa		w	Jl	w	Ag				C
x	x		S	T	x	x				x	MOUNTAIN PRIVET - Forestiera neomexicana			Ap	b					
x	x		S	T	x	x					SNOWY FORSYTHIA - Forsythia intermedia spectabilis, Cl.		y	Ap						
x	x		S	T	x	x					WEeping FORSYTHIA or GOLDENBELLS - Forsythia suspensa		y	Ap						
x	x		S	T	x	x					COMMON ROSEMALOW - Hibiscus palustris		v	Ag						
x	x		S	T	x	x					SIBUBALTHEA - Hibiscus syriacus		v	Ag						
x	x		S	T	x	x					COMMON SEABUCKTHORN - Hippophae rhamnoides			Jl	r	Se				
x	x		S	T	x	x					BUSH ROCKSPIREA - Holodiscus dumosus		w	Jl						
x	x		S	T	x	x					PEEGEE HYDRANGEA - Hydrangea paniculata, Cl.		w	Ag						
x	x		S	T	x	x					CLIFF JAMESIA - Jamesia americana		w	Ag						
x	x		S	T	x	x					BEAUTYBUSH - Kolkwitzia amabilis		w	Je						
x	x		S	T	x	x					THUNBERG LESPEDEZA - Lespedeza thunbergi		pk	Je						
x	x		S	T	x	x					REGELS BORDER PRIVET - Ligustrum obtusifolium regelianum		pu	Ag	b	Se				I
x	x		S	T	x	x					EUROPEAN PRIVET - Ligustrum vulgare		w	Je	b	Se				C
x	x		S	T	x	x					LODENSE PRIVET - Ligustrum vulgare, Cl.		w	Je	b	Se				C
x	x		S	T	x	x					BEARBERRY HONEYSUCKLE - Lonicera involucrata		w	Je	b	Se				
x	x		S	T	x	x					BLUELEAF HONEYSUCKLE - Lonicera banalensis		w	Je	b	Ag				

Useful for hedges, & clipped  
Good fall color  
L. leaves, C. colored  
Stems, F. fruit  
Winter Effect

Bloom  
Fruit

Color  
Season

Color  
Season

I. informal



SAKHALIN HONEYSUCKLE - Lonicera maximowiczii	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
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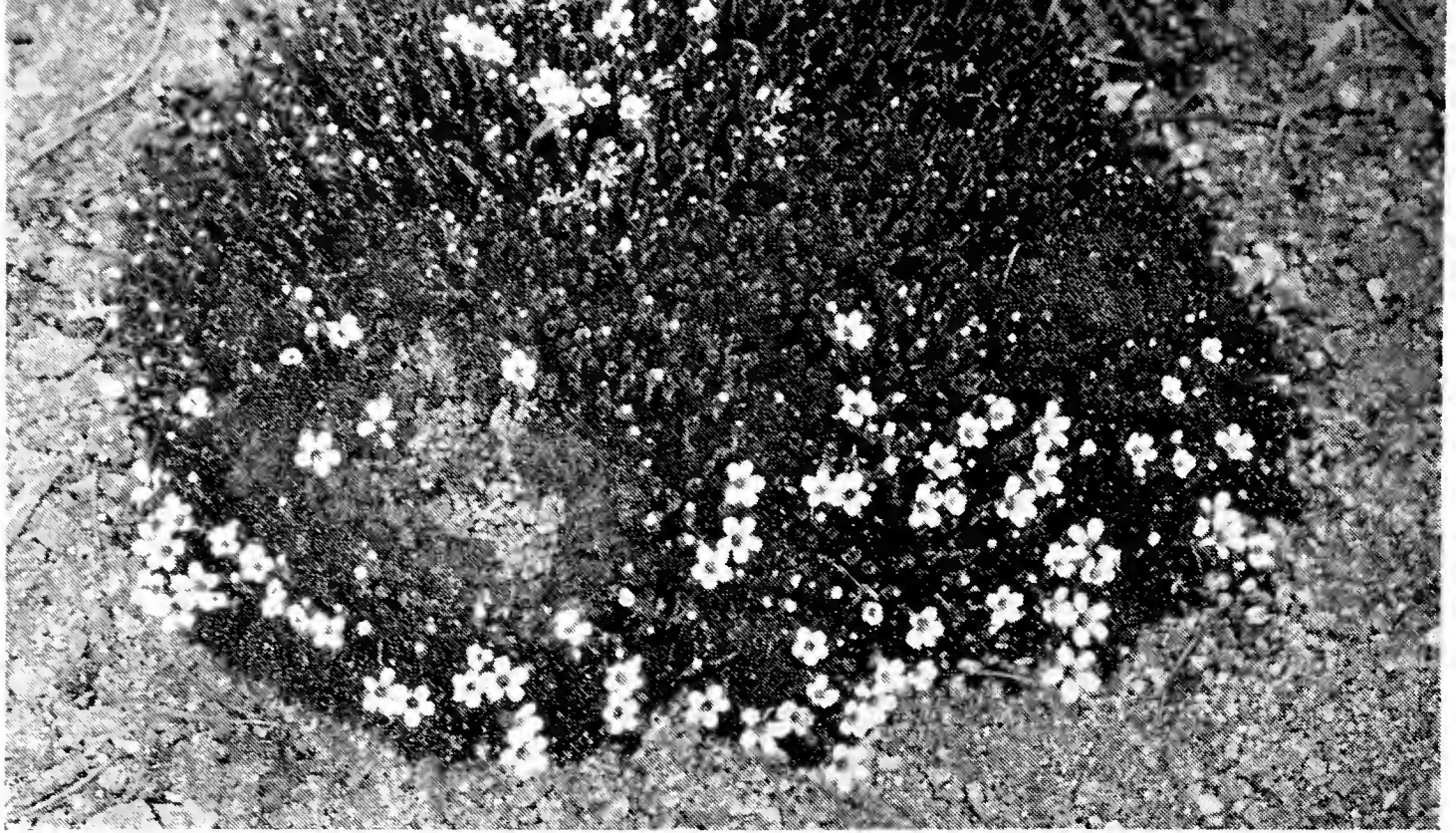




**SCOTT WILMORE SAYS:**

“Use more Pines in your landscaping. They are indispensable and available in tall and bushy types, dwarf and bushy types, tall and open, and plain dwarf; in fact, just about any type one would want for almost any location.”





*Alpine Sandwort, Arenaria sajanensis.*

## GROUND COVERS FOR EVERY GARDEN NEED

By HELEN FOWLER

THERE are few gardens, where, in many places, ground covers are not better looking and more satisfactory than almost any other plant. They are used to dress up and to complete the garden picture, just as books, lamps and other ornaments of decoration provide the finishing touches in the furnishings of a room.

For use in covering bare spaces between larger plants, to tie down shrubbery to lawn margins, to plant between terrace stones, to fill in wall crevices, to finish the edges of perennial borders and to plant under trees where grass will not grow ground covers play an important part in the planting plan. Much too often is this

final detail neglected; it is this little intimate touch, however, which gives the picture its highest charm. This disregard cannot possibly be from a flat purse for ground covers are not expensive and in the interest of economy, a few can be planted in the beginning and allowed to spread. It would be much better at the very beginning to devise a planting plan less pretentious and carry a modest scheme to a complete fulfillment than to start with too much ambition for the first considerable things of the garden and finish by robbing it of its full possibilities.

In addition to their many other uses these flat mats make a companionable uncovering for the early bulbs, while later this covering makes a grateful hiding place for the bulbs' unsightly, browning foliage.

We usually think of but one kind of ground cover, the low, flat spreaders and trailers, but really there are three classes—the tall plants as Columbine, Nepeta, Ferns, down to the very dwarf types, including Ajuga, Myrtle, Ivy and numerous others whose dense tufts and clumps are

*Sedum Kamtschaticum.*





refined enough for the most intimate parts of the garden. On very steep terraces, when not graded down into more gentle slopes, to get grass to grow is next to impossible. Here, plants large in scale and which we seldom think of as ground covers, hold the soil better, are far more interesting and require much less care. The hybrid rose, Max Graf, with its far-flung, deep-pink sprays is ruggedly hardy and unequalled for such a slope or bank in the sun.

What probably interests us in ground covers is not altogether their flowers or fruit but their habit of growth, their attractive foliage, their good looks over a long period and their general hardiness. For our purpose, then, we will confine our summary to creepers, trailers and the not-too-tall perennials of spreading habit with care that most recorded can be obtained in this area.

Why not plan this year to decorate the undressed, outside places with ground covers—they are regarded by many horticultural artists as the spirit and essence of the garden aristocracy.

**COMPENDIUM:** In which the recorded varieties are limited to reasonable proportion, so the beginner will not be bewildered and the more experienced gardener will be assisted in his search for some of the best. There is none of these plants that would not be wholly rewarding and beautiful in the rock garden.

**BISHOP'S PLANT** (*Aegopodium podagraria variegatum*). For use in very coarse places; foliage marined and marbled; covers large shade areas rapidly.

**STONE CRESS** (*Aethionema*, in variety). Foliage silver to gray; flowers pink and rose; 6-10 inches.

**BUGLE PLANT** (*Ajuga genevensis*). For areas under trees; clear blue flowers in June; 6-12 inches.

**BROCKBANK'S AJUGA** (*Ajuga brockbanki*). Both species for covering banks; very compact, purple-blue in May and June.

**MADWORT** (*Alyssum saxatile compactum citrinum*). Open sun; showy for walls; soft yellow.

**WIND FLOWER** (*Anemone pulsatilla*). Hardy; long-lived; large purple cups with golden tassels in green ruffs; 6-8 inches.



*Sedum Anacampseros.*

**SNOWDROP ANEMONE** (*Anemone sylvestris*). Likes shade with straw about base to keep roots cool; will stand sun; white, nodding flowers.

**ROCK CRESS** (*Arabis alpina*). Pubescent; plenty of sun; will live in poor soil; flowers white, mats of late-season; gray foliage.

**BEARBERRY** (*Arctostaphylos uva-ursi*). Prostrate and creeping; glossy foliage, useful in clothing sandy slopes; needs acid soil, lots of peat moss; also aluminum sulphate or tannic acid.

**SANDWORT** (*Arenaria montana*). No special soil, likes a very light shade; white flowers in June; 4 inches; for border edges and between stones on terrace.

**THRIFT** (*Armeria*, in variety). For edging, in well drained soil; full sun; pink and red best.

**SWEET WOODRUFF** (*Asperula odor-*

*Sedum Rupestre.*



ata). Prefers shade; forms mats with clustered dainty white flowers; 8 inches.

**ALPINE ASTER** (*Aster alpinus*). Spring; many large purple daisies; showy; 10 inches. For use in many places, especially for edges.

**ROCK CRESS** (*Aubrietia deltoides*). Thrives in half shade; mats and clumps with trailing shoots; for use along borders.

**BLUEBELL** (*Campanula* numerous varieties—*CC carpatica*, *garganica*, *glomerata*, *muralis*, *poscharskyana*). All easy and desirable.

**BUNCHBERRY** (*Cornus canadensis*). Rapid spreader; half shade; white flowers with bright red fruit; 8-10 inches high, with handsome foliage.

**LEAD PLANT** (*Ceratostigma plumbaginoides*). Mounds of vivid blue midsummer; well into October, finally flowers fall when red calyces give warmth to cooling days.

**ROCK COTONEASTER** (*Cotoneaster horizontalis*). Prefers sunny position in well-drained soil; attractive habit, interesting blooms in pink; semi-evergreen; fruit bright red.

**GARDEN PINKS** (*Dianthus deltoides*). All old-fashioned pinks are excellent.

**GLOBE DAISY** (*Globularia trichosantha*). For use where a light height is needed; flowers blue, finely-tooth leaves; 8-10 inches.

**ENGLISH IVY** (*Hedera helix*). Evergreen; cover base of shrubs and under trees; runs into many forms.

**HARDY CANDYTUFT** (*Iberis sempervirens*). Evergreen perennial; low, compact plants, woody at base; good foliage; white flowers; for use among evergreens and intimate parts of garden.

**MONEYWORT** (*Lysimachia nummularia*). Part evergreen creeper with yellow flowers; pleasing mats under trees or on steep slopes; near pools, may trail into water without harm.

**CREeping HOLLYGRAPE** (*Mahonia repens*). Important should be guarded from the wind and hot sun; foliage most attractive and durable; yellow flowers; and fruit a dark blue berry covered with bloom; evergreen; stoloniferous and fast spreading; semi-shade; among its many uses is to cover rocky banks.

**PARTRIDGE BERRY** (*Mitchella repens*). Evergreen; spring and early summer; part or full shade; red berries; flowers white to pinkish; 4-7 inches.

**JAPANESE SPURGE** (*Pachysandra terminalis*). Evergreen; flowers white, terminal; useful under trees and for bordering walks and drives; shade.

**BLUE PHLOX** (*Phlox divaricata*). Flowers pale violet to mauve; spring; edging perennial borders; for clothing steep banks; important to cut back after blooming.

**MOSS PINK** (*Phlox subulata*). For steep, rocky banks, ledges and borders; sun or semi-shade; April to June; 4-8 inches.

**RUNNING STONECROP** (*Sedum stoloniferum*). For shade; pink flowers; several varieties of sedum for many uses in sun and shade. *S.s. coccineum*, a good scarlet.

**HOUSELEEK** (*Sempervivum*). Many varieties, all interesting.

**MOTHER-OF-THYME** (*Thymus serpyllum*). Also called creeping thyme; many horticultural varieties, June and July; smothered in white blossoms; sun; rich soil.

**SPEEDWELLS** (Many *veronicas*). Of easy culture in good soil; sun or part shade; *V. teucrium rupestris* densely tufted; light blue flowers in early spring; *V. pectinata*, under trees in shade.

**PERIWINKLE** (*Vinca minor*). For interplanting among shrubs, under trees, banks, terraces; one of the best general groundcovers; best to cover from winter sun.

There are also the *Callirhoes*, *Alliums*, *Epimediums*, *Euphorbias*, *Festuca glauca*, *Gypsophilla repens*, *Linum* yellow and blue, *Primulas*, *Saponaria ocymoides*, *Stachys lanata*, *Lamium*, *Oenothera missouriensis*, *Tiarella cordifolia*, *Violets* and one special *Viola*, **JERSEY GEM**.

## HOW TO SEE DINOSAUR

From Notes by Jess Lombard, Supt.,  
Dinosaur National Monument

The moody and extremely beautiful gates of Lodore is easily reached. It is about a five hour round trip from Highway U. S. 40 at Maybell, Colorado. It would be an exceptional car that had difficulty with this trip.

There are all kinds of river trips one can make. For those seeking high adventure and thrills, Lodore Canyon and Split Mountain Gorge runs at high water stage should satisfy. They can be dangerous if the runs are attempted by unskilled or poorly equipped groups. The safe and easy run down the Yampa River from the

Mantle Ranch to Pat's Hole is a breath-taker from an aesthetic standpoint, but does not offer much in the line of plunging, tearing rapids. There can be danger but there are plenty of beautiful canyon trips that can have the thrill of running water travel without as much danger as the visitors would encounter in driving their cars along the highways.

The scenic parts of the monument are far more accessible than is generally known or believed. It is a two hour drive from Highway U. S. 40 to Pat's Hole. This is at the very scenic heart of the monument. Panoramic rim views can be had from certain points on this road. All kinds of cars do make the trip to Pat's Hole and back to the highway without difficulty. Some few do have trouble. There are some steep hills that require good power to climb. Some cars heat up and occasionally flash floods or rains make the roads impassable. Seeing the scenic canyons of Dinosaur National Monument is still in the nature of an exploring adventure.

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## STATE PARKS OR TOURIST REVENUES

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Department of the Interior,  
Washington, D. C.

Man's need for more than just the material necessities of life has been the dominant factor in the development of a system of public parks and recreation areas. Here in the continental United States the Federal Government and the States have set aside for park purposes some 19.5 million acres of land of scenic, scientific, historic, and recreational significance. The steadily increasing demand for, and use of, public parks and recrea-

tion areas by the people is ample proof of the soundness of such a policy.

Setting aside land for park purposes has been a wise, and profitable form of land use and has contributed to the economic growth of our State and the Nation. The economic benefits and values of parks can not be adequately expressed in monetary terms, consequently it has been difficult to demonstrate their value when compared with other productive forms of land use.

The growth of the tourist industry is of particular significance to those concerned with public parks as these areas occupy a prominent spot in the picture.

With the increase in leisure time, the parks are fulfilling a vital role in providing an outlet for the gainful use of leisure and cultural advancement. The state parks have a golden opportunity for furthering the gainful use of leisure as most of them are easily accessible to the public—they do not entail spending the major portion of the leisure time in a travel status.

Probably the greatest contribution the state parks make to our economy is in serving and satisfying what might be termed the daily or short-time recreational needs of the inhabitants of specific regions.

The constantly increasing use of parks is encouraging as it clearly demonstrates the public is finding their parks do produce a satisfying experience and that they are worthwhile. All the advertising in the world cannot continue to sell an inferior product or service. Continued patronage, the satisfied customer, is the true test of public approval. The parks have met that test as evidenced by the number of those who return again and again to satiate their desires.

# MEETING THE PLANT FAMILIES

## AQUILEGIA: Columbine

By L. J. HOLLAND

THE genus *Aquilegia* is without doubt the best loved and most widely grown of all the Buttercup family. Its popularity through the ages is attested by the fact that the list of common names applied to the Columbine is quite long, including such as, "Meeting-houses, Cluckers, Cock's-tail, Lady's-shoes and Jack-in-trousers." One species, *A. coerula*, our State Flower, being especially dear to the heart of every Coloradoan.

Few flowers, indeed, have a greater range of color or such pastel shades, and none can combine these with such dainty, airy gracefulness of blossom and refined foliage. When these assets are added to hardiness, dependability and ease of handling, it is small wonder that their popularity is well nigh universal. Of the almost half a hundred species indigenous to the North Temperate Zone, there are none that I could not recommend for the home garden. There are tall growing kinds, such as *A. chrysantha* and low growing species such as our own *A. jonesi*, suitable for the rockery; some like *A. longissima* have spurs up to four inches long, while *A. clematiflora* is spurless. Nearly all are valuable as cut flowers in the perennial border.

As has been intimated, the culture of Columbines is fairly simple, doing quite well in any good loamy soil, but any well rotted manure or compost worked into the soil will be greatly beneficial. They prefer a neutral to slightly acid condition, and although splendid specimens have been grown in the open border, light shade is beneficial to all varieties, for they do fade some in our intense sun. A tip to those who would try to suc-

ceed with our native species, get a couple gallons of leaf mold from under Pine or Spruce trees and incorporate it thoroughly with the soil around the plants, a quart to the plant is sufficient.

Columbines may be divided in Fall or early Spring, but I prefer to start them from seed, which germinate in about thirty days. Seeds planted about one-eighth inch deep in a shaded seed bed or coldframe in late June will give good, sturdy plants, which may be transplanted in late September. Our State flowers, like *A. vulgaris* and *A. glandulosa*, should be treated as biennials, for they last only two or three years, usually. While we are on the subject of seeds, why not take a packet of our Native Columbine seed with you on your next trip to the mountains and plant them alongside a stream? You'll always be glad that you did. Here is one place that Nature welcomes our assistance.

For convenience, the species are generally divided into the American, or long spurred, and the European, or short spurred, groups. Some of the better American species are:

*A. canadensis*: red and yellow.

*A. coerula*: blue and white, Colorado State Flower.

*A. chrysantha*: bright yellow. Var. *jaeschani* is smaller, with red spurs.

*A. formosa*: Alaska Columbine; red and yellow, rather short spurs.

*A. skinneri*: red and yellow. Blooms until late September, but is from New Mexico and Sonora and should be in a protected location.



*A. jonesi*: blue and white. A little gem from our mountains.

Of the European types we have:

*A. vulgaris*: Common Columbine, mostly violet. Northern Europe.

*A. glandulosa*: lilac-blue, petals edged creamy white. Siberia.

*A. alpina*: blue or blue and white. Dwarf. Switzerland.

*A. flabellata*, var. *nana alba*: Dwarf white from Japan.

*A. clematiflora*: blue to purple. Spurless, clematis like flowers. Nepal.

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## HARDY--BUT WHERE?

MAUD McCORMICK

FOR a dry, sunny border, I have just read, excellent subjects are amaryllis, nerines, agapanthus, crinums, sternbergias and other plants still less familiar to Colorado gardens. All the plants mentioned, I am told, are quite hardy, as is undoubtedly true in Southern England, the home of the publication in which the article appears.

Obviously, it is entirely false in Denver. Not one plant mentioned can, by any stretch of the imagination, be considered indispensable to one of our dry, sunny borders south of a wall. For in Surrey, England, less than twenty miles from the English Channel, the words apply to an atmosphere unknown to us. Tender, bulbous plants that withstand an occasional hard frost and short periods of what that fog-ridden island calls drouth are very, very different from our yucca, cactus, helianthemums, and our many wildflowers that tuck their toes in crevices of rocks and grow and bloom apparently without any sustenance.

Many of England's so-called hardy plants thrive in our own country, south of Washington, D. C. Others survive the cold of the snow-blanketed eastern states, but not the drouth and sudden drops in temperature they are subjected to in our climate. Conversely, some of our noblest plants fail to perform well in more kindly regions. Even the bearded iris family has mem-

bers that do not live and bloom as well in New England as they do here. A friend who has learned about gardening by the trial-and-error method once remarked that she had wasted enough seed to mulch her large garden at least an inch deep. That could have been Irish exaggeration, but the meaning is clear.

For all of us are catalog lovers. Our most fascinating reading in these winter months is the illustrated flower-catalogs. Pictures of magnificent plants in bud and bloom are almost irresistible. But gardens are, too, and there are many gardens in Colorado towns and cities where visitors are welcome and where they may see in bloom plants which obviously will do well in other Colorado gardens. If there are things you cannot find, the answer may be that they do not grow well here, or at all, unless they are given a very special kind of care possible only in the very exceptionally well maintained garden. Certain hobby plants will always be difficult to secure except in the catalogs of those who specialize in the rare and difficult things. There you must go for them. But for your perennial borders, your shrubs and plants for naturalizing in difficult locations, your dry and sunny spots, your local nurseries and their catalogs make the best provisions in plant materials.

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## THE WARDIAN GARDEN

By MILDRED STEELE

**F**EW things have given us so much pleasure as our Wardian Garden. This particular one is housed in a large case which I had built from second-hand plate glass, and 1-inch angle iron. The frame work is 15"x 30"x23" high. After having the frame welded together, I took it to a glass store, along with a large can of aquarium cement. They cut and set the glass into the framework. The finished case could serve equally well as an Aquarium or Wardian Case. I had a very heavy wire bent to fit the inside panel which was to be placed next the window. It was snug at the base, not so snug at the top. This was to support a trailing ivy, making a pleasing frame for the smaller plants. Too much sun will not be necessary, and may cause plants to scald. I have mine in an east window that is protected by an ell on the house.

For bedding material, I used a mixture of vermiculite, peat moss and sphagnum moss. Any one would serve equally well, so long as the moisture inside the case is maintained. I keep this material two to three inches deep, so it will come well up on the pots of plants.

The few more or less permanent plants, I removed from the pots and set in a "well" containing potting soil. Otherwise, most things are kept in pots, because I enjoy re-arranging them, or temporarily using them for another purpose. A Wardian Case makes an excellent "climate" for starting a few choice cuttings. Place them in a pot full of washed sand and submerge in the base material. Make certain, of course, the sand is kept always moist and temperature as even as possible. I like to have a piece of

cedar root or a favorite rock to add a little atmosphere, but it isn't necessary. However, if one wishes to make a real woodsy garden, all plants can be placed in potting soil, about as much as the original pot contained. A ground cover of moss or baby-tears can be established, and the plants arranged or "landscaped" to make a tiny replica of the deep woodland. We have even submerged a dish with a capacity large enough to keep a small fish in it, and with a few small rocks around, it is a very interesting motif. There are endless possibilities.

For a very warm, dry room it is well to keep the Wardian Case covered, at least partially with another piece of glass. Close watch for mildew or scald is the best rule for covering or not covering. As tall as my Wardian Case is, I have never found it necessary to cover it, except on a few exceptionally cold nights. We have an old house, and there is considerable variation in temperature.

Watering is best done with bulb sprayer. If the case is functioning well, this need not be done oftener than once a week, or even less often if covered with glass. When there is considerable dew still hanging on the sides and cover, there is no need for more water.

We have had many kinds of plants at different times: native wood plants, tropicals, and the newer foliage plants. Among the commercial plants we have tried and enjoyed are the following:

Orchids, bromeliads, various ivys, various peperomias, maranta, philodendron, various small ferns, 2 special serissa, Japanese box, Japanese evergreen, 2 miniature palms, African violet.



This list is but a small beginning of the possibilities. The nursery counter at the Woolworth Stores has been a great boon to those who seek unusual plants for the house. Also, one can find mosses and lichens in the woods on a Sunday's outing, that are a great source of interest. They not only furnish a living reminder of a happy experience, but make one more alert to the small treasures nature provides for our enjoyment.

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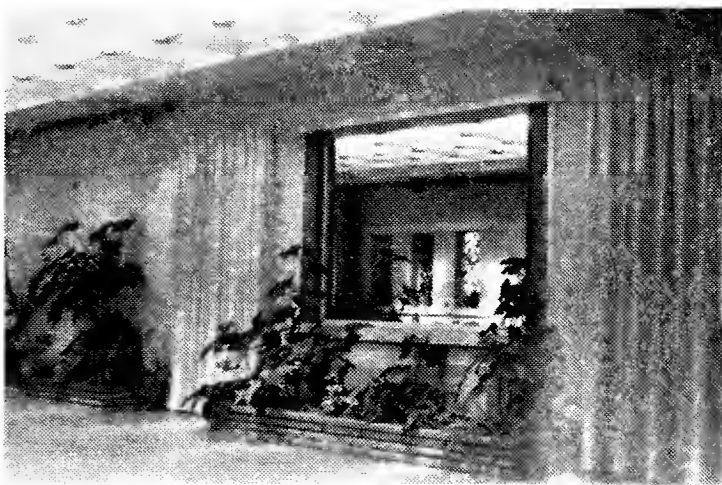
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## OUR GARDENS SHOULD HAVE THE BLUES

By MAUD McCORMICK

FROM the first crocus until the last chrysanthemum there is plenty of yellow and orange in the garden. Usually there is also a profusion of pink and red tones. Purple and lilac and lavender, too, are not hard to find. True blue is a little harder to come by. But it is worth while to spend a little time and study on the problem of making the flower borders reflect the brilliancy of our Colorado skies.

In the spring, there is the tiny clear blue forgetmenot as well as its coarser associate, the dwarf *Anchusa myosotidiflora*. *Polemonium* and *Baptisia*, too, lift their blue spikes a little higher. Many veronicas are blue in effect though some have a lavender tinge. *Linum perenne*, the fairy flax, makes misty mounds that faithfully reflect the clear summer skies, and two campanulas, *persicifolia* Telham Beauty and the double Misty Morn, furnish spires of the same color for a greater part of the summer. Later, the platycodons take their place and the perennial blue salvias lift tall spires above the autumn border.

Two of our noblest perennials, however, contribute the most effective masses of blue. Clear blues of varying intensity have been, to my thinking, the greatest contribution of the iris hybridizers in recent years, in spite of the present interest in the pink ones. Chivalry, Missouri, Azure Skies, Great Lakes—where will you find anything more exquisite in May? Later, and repeating in the autumn, are the delphiniums, tallest and most striking spires in the garden. In groups of threes at the back of the border, the fine double Pacific hybrids make an unforgettable picture in any color, purple, rosy lavender, shining

white, or the new pink so recently introduced, as well as in their original tones of blue. But if they came only in the soul-thrilling blue of the variety so rightly named Summer Skies, they would still be the best tall flower in our gardens.

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## ROBINS

By MRS. ROY LEE

**R**OBINS we always have with us—from January until late fall. Sometimes they can be annoying. They think they own the place.

One spring I was thrilled to have a pair of black-headed grosbeaks stay around our yard for several days. The first time that I had ever seen them. To my great joy they started to build a nest in a tall ash tree near the house. The next day I heard a violent quarrel going on up in that tree. The robins were disputing the grosbeaks' right to live there. I wanted to shout, "Stand your ground grosbeaks, I own this place and I want you to stay." But the robins won and the grosbeaks disappeared. I felt like shooting those robins.

But, of course, I wouldn't; I really love them. When a few appear too early in January with gay orange vests stretched across bulging bosoms, I want to scold them. Did they leave enough Russianolives last fall, I wonder, are there any apples, and will they suffer through the heavy storms which Colorado will still have?

Robins are friendly birds to have around. You may see them taking a shower under the spray from the hose or splashing in the bird bath where they leave cherry seeds, olive seeds or what-have-you. You may find olive seeds on the front steps where the robins have been sitting. You watch them running over the lawn or cocking their heads to one side before starting to pull out a long worm. Sometimes the worm is so long that the robin must raise his bill to its fullest height, and still more worm. But calmly Mr. Robin doubles it up inside his mouth, part of it hanging out at the sides, and takes a strong grip on the remainder. It is fun to watch the parents feed their young

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ones after they have left the nest.

The robins believe in the policy, "Late to bed and early to rise."

You may listen to a concert at dusk given from the topmost twig in the tallest tree when all other birds are tucked into bed. But you will also be awakened in the morning by the loud songs of the robins greeting the first light of dawn.

And so, though I love robins, sometimes they annoy me.

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# WHAT CAN A GARDENER DO IN MARCH?

ANYTHING in the way of weather can happen in March. There may be nice days when work can be done on the ground and there will probably be many "bad" days when even the enthusiastic gardener will be glad to stay inside with his books and catalogs.

During those "nice" days do everything possible to prepare the soil for the later plantings. Work in humus wherever there is open soil to be planted during the season. Do not leave quantities of fresh manure or other fertilizer where it will come in contact with the roots of new plants later. Peat, up to 30% will benefit almost any soil whether it is heavy or sandy. Well-rotted manure, compost or leafmold can be used in lesser quantities if it is thoroughly worked into the soil.

The stormy and muddy days are good times to finish ordering plants and garden services. It will also give you more time to refresh your memory on cultural methods and pest control. When the weather really gets good there is little time but to get outside and do all the little things that gardens big and little need.

Any time that the ground is free of frost and not too muddy is a good time to start the needed transplanting of woody plants and perennials. Evergreens can be moved with balls of earth at any time now. There are a few slow growing things, notably the Birch, that are more safely moved at just the time that their buds start to break and show green. Other difficult things include the Honeylocust, Hawthorn, Hackberry and some of the hard Maples and Oaks. These slow growing things should be given special care to see that they have sufficient roots, that these roots are not exposed at any time to the wind or sun, that they are planted in good soil containing plenty of peat, that the soil around their roots is always kept moist without being ever soggy and that they are occasionally sprayed over the top or shaded.

Don't be misled by the pretty pictures in out-of-state catalogs. Build your garden with foolproof plants as a basis, then if you like to gamble, try a new thing or two. Nurserymen and gardeners who have been in this area for many years can advise you as to those things which are reliable, impossible or questionable. If you should have to order plants from a distance and they should arrive when the weather is bad, they should be carefully handled to keep them in good condition until they can be planted out. Unwrap the tops but keep the roots covered and moist, unless it is possible to "heel" them in the soil somewhere outdoors.

Do not yield to the temptation to uncover everything at the first feel of spring. There is often more weather which could cause "winterkill" after March than before. It is not often the cold alone that kills at this time but the sudden changes in temperature along with the hot sun and dry air that is usual here. Tulips planted on the south of a building will probably be above ground and may be damaged by late freezes. It is not practical to try to keep them covered with soil. Usually a light protection such as afforded with evergreen boughs or coarse perennial tops is safer.

While you are waiting for real spring weather go out to the hills and hunt for the first wild flowers on sunny south slopes, wander around the parks and see how many of the trees you can recognize from the bark and twigs, and see if you can identify some of the plants along the roadside by their old seed stalks.







April, 1952

# *The Green Thumb*

COLORADO'S GARDEN MAGAZINE



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# The Green Thumb

Vol. 9

APRIL, 1952

No. 4

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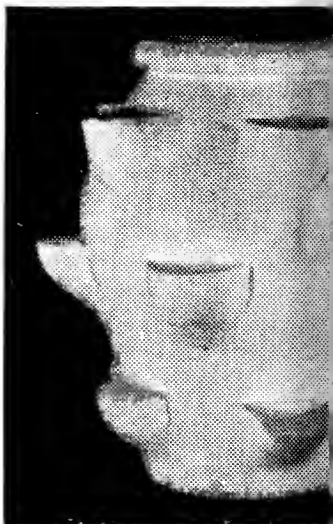
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APRIL SCHEDULE

- April 3—Experts talk on "What do good trees means to a City," George Stadler, Gail Rumley, Pat Gallavan.
- April 6—Sunday. Trip to the beautiful Red Rocks-Hogback country north of Plainview. There should be flowers and the rocks are always beautiful.
- April 17 — Thursday evening, 8:00 P. M., at Horticulture House. Do you want to know what annual flowers please most of the people? Come hear Wendell Keller of the City Parks Department.
- April 19—Plant Auction, Saturday at 12:30 P. M.
- April 20 — Sunday. Circle trip to Watertown, meet at Strontia Springs and exchange keys, early flowers and flowering shrubs. Leave Horticulture House at 8:00 A. M.
- April 25, 26, 27, 28 and 29(?). Trip to Lodore Canyon. Leave Friday evening. Visit Gateway, Pat's Hole, Harpers Corner and any other we have time for.
- April 27—Cub Creek trail out of Brook Forest in Evergreen district. Led by Sylvia Stephens.
- May 4—Sunday. Tour of Boulder for early tulips, flowering shrubs, and trees. Led by Walter Pesman.

PLEASE

Do not call Horticulture House except during business hours—8:30 A. M. to 5 P. M., Monday through Friday. Our custodians, the Cooks, are already doing so many extra things for us that we think they should have a little private life of their own. (Would someone like to volunteer to be at Horticulture House on off hours and answer the phone.)

To cancel registrations for trips you may call Mrs. Timm, PE. 5565 at off hours or in other real emergencies call George Kelly at SU. 1-0181 (if you can catch him home). Thank you.

KEEPING UP WITH  
"LOOK & LEARN"

Do you want to keep up to date with the "Look & Learn Garden Tours"? Then, read on—our first will be tulips and small bulbs in bloom. Did you ever want to look behind a wall into a beautiful garden? Have you ever wanted raised beds—no stooping? or hundreds of tulips, gay as can be, growing in profusion? What about prize winning vegetables in a small garden?

This is what we have lined up for the first group of garden visits with our experts in attendance! So come —LOOK & LEARN.

One of the greatest joys of a gardener is to see little plants breaking through the soil from seeds planted. Try a few things in boxes or pots in a sunny window even though you might buy the plants cheaper at a later date.

# WHAT THE WELL-DRESSED BUD WEARS

By H. D. HARRINGTON

**F**ASHION hints for buds! This is to be a story of overcoat styles; what the really well-dressed bud has been sporting throughout the last few months. Happily our job is easier than to attempt to tell of the fashions in human dress. While it is true that each tree may have buds that differ from its neighbor's, still its own style in bud coverings is the same year after year. The same old pattern of last winter's coat must do a bud for this season. Thus by studying the old we are able to prophesy the new.

However, before we tell this story of Nature's styles perhaps we should ask ourselves as did Shakespeare about a name, "What's in a bud?" Have you ever opened a winter bud and examined its contents? Most people are very much surprised upon doing so. We all have noticed how the new leaves and flowers appear in the spring with almost magical swiftness from the buds, transforming the lifeless looking branches almost overnight into objects of awakened beauty. Now in nature as in the affairs of mankind we cannot expect the loveliest of things to be fashioned in too short a time. A beautiful picture cannot be painted in an hour. Can we then expect the leaves and flowers to be formed in the few days in which the buds are opening? If not then we should be able to find within such a winter bud, next season's leaves and flowers already well formed. Sure enough, in most cases the leaves and flowers are there in astonishing completeness.

Therefore this winter when your poetically inclined friend mentions how bare and naked the white branch-

es of your Birch tree appear, you have a means of bringing him quickly back to earth again. You can tell him that these "naked" branches are already covered with leaves, in fact, everyone of the leaves destined to appear the coming spring. But be ready with some quick explaining!

Some one in Germany, where patience seems to be more of a virtue than in our country, claims to have counted the entire number of leaves on a Birch tree. He found about two hundred thousand leaves! One thing is certain, every last one was folded and packed away in the buds the preceding winter. As you can imagine there was no space wasted. The sample case of a salesman with all its economy of space cannot rival a bud.

Not only would we find all the next season's leaves present, but as mentioned before we would find them surprisingly well developed. Characteristics such as general shape, kind of veins and type of margins—those characters that allow us to recognize a tree by its mature leaves, all are there in a sort of miniature edition. I have seen a group of people who did not know the trees in winter, open a Shell-bark Hickory bud, examine the leaves within, and then identify the tree from descriptions of mature leaves!

But we are forgetting next season's flowers. If we open the large end bud of Magnolia or the clustered side buds of the Golden Bell we find miniature flowers complete in every respect but size and color. Such flowers can be successfully compared with the descriptions found in catalogues and flower books. These flowers may be



*Left to right.*

*Twig of a Shell-bark Hickory showing the hairy bud scales.*

*The same bud with its fifteen overcoats removed. The College boy with his racoon coat has nothing on these leaves for winter protection!*

*Twig of a Magnolia with one of the very largest buds known to the author.*

*The same bud with three of its outer coats cut away. The leaf shown is a Jumbo among bud leaves, for it is over an inch in length.*

found in the same bud that bears the leaves as in the Hickory or Juneberry. Other trees have flowers apparently snobbish in this respect and they must have separate buds. Such flowers if they so desire can appear before the leaves push out from their winter home. The showy blossoms, like those on the Judas tree, by their gorgeous colors and odors which serve to advertise the free lunch of nectar hidden in their cups, are seeking to attract pollen spreading insects. In such cases the absence of a concealing leaf canopy works to their advantage. Even the less conspicuous flowers like those on the Elms, in their quaker dresses of somber yellow and dull reds find an advantage in thus outstripping the leaves. Their pollen is carried by the wind and there is no barrier of leaves to prevent its spread from flower to flower.

Winter is a closed season for trees and the factory has literally shut up shop for the time being. We should hardly expect to find much growth of leaves or flowers in a bud through the cold months. But since these

structures are present in such completeness we might be curious enough to wonder just when they are formed. Here again we may be due for a surprise. In the axils of the older summer leaves the winter buds are developing. Nestling inside these growing buds the next season's leaves and flowers begin to make their appearance as early as June or July. By the time of leaf fall they are as complete as they will ever be before their emergence.

If the entire number of next year's leaves is present in the buds before the fall of the older leaves then it appears that a tree may actually have two season's leaves present upon its branches at the same time. If our friend in Germany had counted the entire number of leaves on his Birch tree in late autumn, he would have found not only the two hundred thousand old leaves about ready to fall, but hidden away in the buds he would have had to count some two hundred thousand more! It seems as if we can double his reported total for him.

During the bitter cold of the winter, with the dangers of ice, snow and chilly winds, next year's flowers and leaves must be protected. Just as we pull out from storage our furs and overcoats, so do the buds don their coverings of blankets and wools. Even the old red flannels find their counterpart in the bud coverings of the Red Elm. Such protecting layers are made up of little envelopes called bud scales. It is upon these scales that woolly hairs or resinous waxes are so often found. It seems, however, that a few trees have tried a form of nudism over winter. Like those hardy souls among us who persist in running around in the winter-time without hats or overcoats, trees like the Paw Paw or the Wayfaring Tree disdain to protect their young flowers and leaves by bud scales. Perhaps they rely upon a natural hardiness to carry them through the cold. But even in such cases the exposed parts are covered by a dense coating of hairs.

Strangely enough these coats and woolly coverings do not really protect against the cold as once believed. Certainly they do not keep out the cold for on a cold winter day the most of the moisture in a bud is frozen to solid ice. Our own coats and sweaters function by preventing the ready escape of the heat generated from our body. However plants do not have a body temperature much warmer than the air that surrounds them. Consequently there is no great amount of heat to keep in. What then is the use of the bud scales? Careful experiments have shown that the greatest hazard to the young leaves and flowers within a bud in winter is the loss of too much water, a loss that may finally result in a death by drying out. Remember, too, that the frozen ground allows but little absorption of water by the roots. In

many ways a bud on a cold winter day may be like a thirsty traveler on a dry desert—both suffer for lack of water. The intense cold draws the water outside the delicate, tender, brick-like cells that go to make up a flower or leaf. This water is frozen to solid ice in the spaces between the cells. The chill winter winds carry away this moisture as it thaws before the tiny cells can recapture it again. When this happens our tree or shrub has winter-killed. The most of the protective devices we use to prevent this killing of those woody plants not hardy in the north, such schemes as covering all or a part of Roses or Azaleas with straw or branches from evergreens, actually protect by breaking the force of the drying winds. Instead of protecting from the cold we are trying to cut down water loss. Now we begin to see the use of the bud's sweaters and overcoats. What the well-dressed bud will wear this winter will be something—bud scales, resins or woolly hairs, that will prevent too great a loss of that precious life fluid—water.

Then comes the miracle of life awakening! In the spring come the warmer winds, and the frozen soil is thawed away from its grip of ice. The roots take in and force water up toward the ends of the twigs. The flowers and leaves inside the bud, swelling rapidly, throw aside their winter coats. Occasionally they make the same mistake as do we poor hopeful mortals. Have you ever been deceived by that springtime conspiracy of sun and wind? Trusting to the promise of the sunlight streaming through the window-pane, have you ever sallied forth without your overcoat and fallen foul to the influenza laden wind? Sometimes the leaves and flowers make this same dangerous blunder. As a friend of mine remarked about them one year, "Just





*Two more bud scales removed with a preview of one of next seasons flowers. Notice how large and distinct the parts appear.*

another case of where the budding genius turned out to be a blooming idiot!" Happily this mistake is not made so very often.

In these sophisticated times I must confess to being old fashioned enough to discover many a thrill in watching the time-tested workings of a wise Nature. Even when the world of living things seems to be locked in an icy sleep I still am able to find a great deal of interest in noticing how our plants meet their difficulties and solve their problems. The buds of our trees and shrubs have always held a kind of fascination for me and I never tire of studying them. This spring when the ground is still covered with snow and the cold winds whistle through the branches of our trees perhaps you will remember with me that next season's glory of flow-

ers and leaves are safely tucked away in their waterproof coats.

The clothing that we will wear the next few months will last little longer than the winter's snows; in a few short years it will seem strange and out of place. But the covering of the winter bud is more permanent. It will not surprise us then to find next winter that the trees and shrubs have arrayed their buds in garments whose unchanging fashions reach back beyond the dawn of humanity and whose styles were created in a more eternal city than Paris!

### FROM SHADE TREE DIGEST

There is something fascinating in the study of trees. The development of a tiny seed, which you may hold lightly in your hand, into a structure weighing several, perhaps many, tons and rearing itself seventy to one hundred feet into the air would be regarded as a miracle were it not for such common occurrence.

The Tennessee Conservationist.

*The Magnolia flower in blossom. If we compare it with the flower in the bud we notice that they are not so very different from each other except in size and color.*



# MEETING THE PLANT FAMILIES

## CAMPANULACEAE: Bellflower Family

By L. J. HOLLAND

**T**HIS is a medium sized family of about three score genera and 1,500 species. While it is circum-globular in distribution, most of the species are found in the temperate regions, many of them alpine. Most species are perennial, but a few are annual or biennial. Since, in their natural habitat, most of them grow in moist locations or in wooded areas, it is not to be expected that garden varieties will do their best unless given light shade and plenty of moisture. Soil need be of only average fertility, and Harebell and Canterbury-bell seem to thrive in fairly poor soil.

*Campanula* (Bellflower) is the best known genus of this family, and perhaps the best known species is:

*Campanula medium*: Canterbury-bell; this is a biennial, but seed sown in late summer will produce flowers at the usual time (late June) and also give a good display throughout the summer. There is a double form that has an extra corolla, sort of bell-within-a-bell arrangement; this is not to be confused with *C. medium* var. *calycanthema* (Cup and Saucer) which has an enlarged, spreading extra corolla that is not unlike a saucer. Seedlings of any of the above may be potted in the fall and brought into the house, where they will give a wealth of bloom in early spring.

*C. persicifolia*: Peachbells, one of the finest of the perennial kinds and is normally blue or purple; Var. *alba* is white and there are double forms of both available. Height about 2½ feet. June, July.

*C. rotundifolia*: Harebell, Bluebells of Scotland; attaining a height of about one foot, is the species most often grown in the rockery. Flowers

blue, a white variety is met with occasionally, but is less vigorous than type. June.

*C. carpatica*: Carpathian Harebell, is also very good in the rockery, 9 to 12 inches high, it blooms June to August, almost continuously. This excellent species has several varieties that come in different shades of blue and also a white form.

*C. pyramidalis*: Chimney Bellflower, is one of the better taller growing sorts. Blooming in mid-summer, it makes an excellent plant for the back of the border, as it attains a height of four feet. Like so many of the *Campanulas*, there are white and blue varieties. Responds to pot culture better than most of its family.

*C. glomerata* is widely grown and is the most variable *Campanula*, ranging from 1 to 2 feet, with flowers from deep violet to almost white. Var. *dahurica* is very early and probably most often grown, but is inclined to spread from the roots; Var. *sparsiflora* is even earlier, but has smaller flowers; Var. *speciosa* has the largest flowers, blooms in mid-summer and does not spread. All of these have flowers in "heads", rather than spikes.

*C. lactiflora* is another tall sort, up to 5 feet, has milk-white flowers lightly tinged blue, very good border plant. Blooms in July.

*C. thyrsoides* is rather different, being yellow to cream in color. A little over a foot high, it is fine for the foreground.

*C. abietina* with flat blue flowers, *C. garganica* with star-shaped sky-blue flowers and *C. pusilla* with white bells, are a trio for that sunny spot in the rockery. *C. portenschlagiana* (don't let that name throw you) is

another dandy for the rock-garden, but it demands semi-shade. Purple flowers in July.

*C. latifolia*, a coarse variety with purple flowers, is a pest that is often met with. It spreads badly from the roots and is difficult to eradicate.

*C. macrostyla* is an annual that if started indoors in March will give lots of bloom in late August. Var. *Angelus Bell* has deep rose flowers.

About the only pests that bother *Campanulas* here are slugs and I spray with lead arsenate to combat them.

*Platycodon* is another member of the *Campanulaceae* that is well known to most gardeners, some even classing it as the "perfect perennial" due in part to its beauty in bud as well as blossom. Popularly known as Balloon-flower or Chinese Bellflower, it is easily started from seed or divisions. Cultural requirements are about the same as for *Campanulas* in general. There is only one species, *grandiflorum*, and the flowers range from bluish-purple to white in either the single or double forms. There is also a pink variety available that is very good, it has not been sufficiently stabilized to come true from seeds, but one may purchase plants from a good many sources. The type is about two feet tall, and blooms in June and July. Var. *mariesi* seldom exceeds one foot, but the flowers are as large as the type and in about the same color range.

*Specularia speculum* (Venus'-Looking-Glass) is an annual of the Bellflower family with purple, blue or white flowers. Growing to less than a foot high, it is a rock-garden gem. Propagation is by seed sown where the plants are to remain.

*Ostrowskia magnifica*, Giant Bellflower, is a little difficult but is well worth the effort. This genus from Asia grows up to five feet tall and has pale lilac flowers, sometimes four

inches across, that appear in July.

Although it is difficult, it is by no means impossible to grow *Ostrowskia* in this region. A deep, sandy loam that has plenty of humus is a necessity. The plant is dormant after blooming, as is the Oriental Poppy, and to retard Autumn growth it should be kept dry as possible. A large flower pot inverted over the plant will keep off any rain and keep the ground several degrees cooler. Winter protection is a must, and should not be removed too early. The growth in Spring should be protected from frost, in the manner one does with Foxtail lily. The fairly rich soil, good drainage and a sunny exposure, and success is almost assured. Dealers handle only the tubers, as it takes it from four to seven years to bloom from seed.

*Phyteuma* (Horned Rampion) and *Jasione* (Sheep's-bit) are sometimes grown in the rockery; the former in several varieties, the latter in only one or two.

*Lobelia cardinalis* is placed by some authors in this family while others give it a family of its own, *Lobeliaceae*. It grows to about two feet, with rather coarse bronzy-green foliage and spikes of brilliant scarlet flowers. Culture is the same as for *Campanulas*.

---

### ROLL YOUR LAWN NOW

Have you a good lawn roller as part of your standard equipment? The lawn should be rolled first thing in the spring—this spring—as soon as frost is out of the ground. Why should this be done—in order to press the roots of grass back into the soil and even up the ground after the heaving caused by the frost's action. Every once in a while during the summer a rolling will level up all depressions, bare spots, etc. These should be sown immediately with grass seed.—H. F.

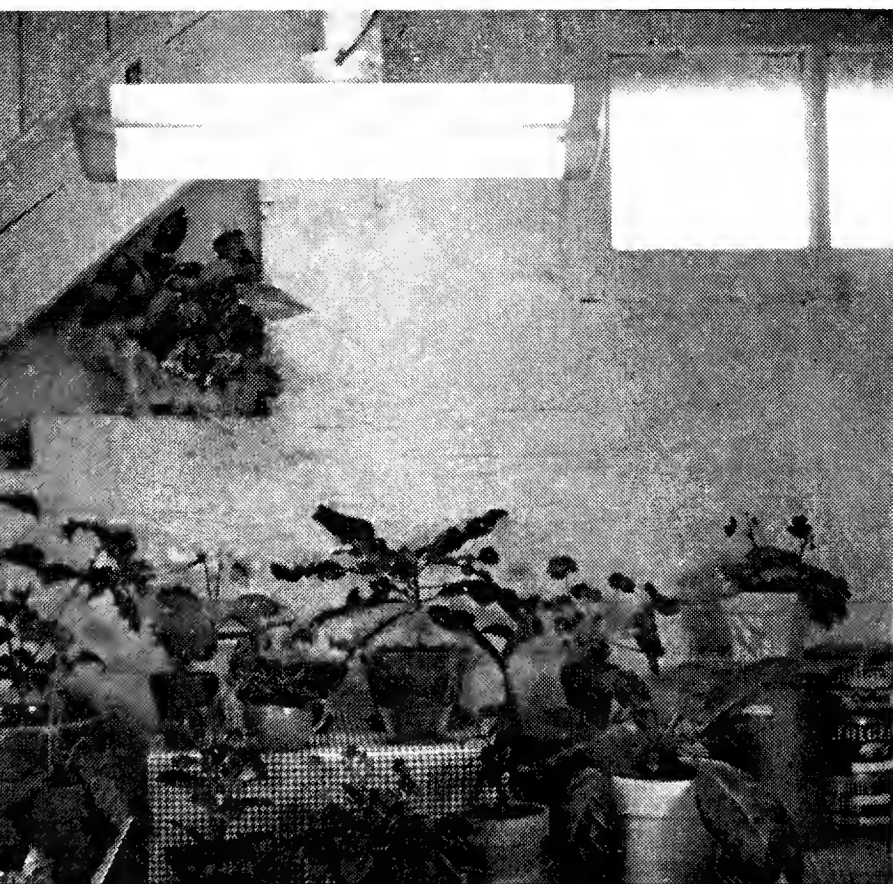
## HOUSE PLANTS WITH NO SOUTH WINDOWS?

**A**LL good gardeners like to have a few growing things around them in the house over winter, but not all houses have suitable south windows. Following are three different solutions for this problem.

Mrs. Behse has successfully used fluorescent lighting in her basement, and Mrs. Merilatt has been experimenting with the supplementing of a few minutes use of a sun lamp where windows are too shaded.

Mrs. Earl Davis has worked out the solution that many of us have dreamed of—a little greenhouse. Her result is a little leanto structure which fits on the side of her house and is entirely below the main floor window sills so as to hide no view and is entered by two steps up from the basement. Her heating is by automatic gas stove and the ventilation is also controlled by a thermostat. A unique feature of this little house is the division by plastic showed curtains which allows one-half of the house to be 10 degrees warmer than the other. Shade is provided when necessary by removable lath screens.

*Fluorescent lighting by Edna Mae Behse.*



These devices allow their owners to maintain a green coloring on their thumbs all winter. Others may profit by these people's experiences.

### ARTIFICIAL LIGHTING FOR RAISING HOUSE PLANTS

By EDNA MAE BEHSE

My experiment with artificial lighting for growing house plants began very naturally. What house plant enthusiast hasn't found her available space crowded beyond the straining point?

With a growing desire to try raising gloxinias from seed, I simply had to find a solution to my problem of space. About this time, I read of the use of fluorescent lighting in the basement, for geranium culture.

My gloxinia seeds were duly planted. During the germination period, we built our table in the basement, and installed a fluorescent light. Our light has three 18-inch tubes and is mounted about 27 inches above the table.

The tiny gloxinia seedlings grew well with this light turned on from about 8:30 A.M. to 8:30 or 10:00 P.M. Perhaps because we keep our basement rather cool, my geraniums did better in a warm sunny window. As the gloxinias matured and began to set buds, they also were brought to a sunny window veiled by a thin curtain.

The fluorescent lighted table in the basement is still a necessary part of our home. It is an excellent place to carry over the plants that are going dormant, as well as those not yet ready for my windows upstairs. It also spares my family the unsightly presence in the living room of my experiments with air layering and other methods of plant propagation.



## USE OF A SUN LAMP FOR GROWING HOUSE PLANTS

Mrs. P. G. Merilatt of Derby, Colorado, has experimented some with a sun lamp to supply light to plants which get little or no sunlight because of too many shade trees or lack of enough light from windows. Geraniums and oxalis were the first plants to be treated and these fared badly, because of using the lamp too close or for too long a period of time. Later, she found that using the lamp ten to fifteen minutes at a time, two or three times a day, at 30 inches was beneficial. This procedure was successful on ivies which got no sun, and she reports that it improved the color of her Chinese evergreens and philodendrons.

## MONEY TREES

MRS. BERNICE PETERSON

Who said, "money doesn't grow on trees?" We admit it doesn't but have you tried growing it from a ten-cent packet of seed?

"Honesty," Lunaria or Money-plant is a biennial—at least it takes two growing seasons to harvest the money, but it's fun. Try planting the seed in open ground, partial shade is best, sometime during May. The first season the plants furnish green foliage. The next spring brings pink phlox-like flowers. As each flower fades a seed pod is formed. The first of August the browned, flat seed pods are ready for harvest. Remove the two crisp brown papers on either side of the pod, flick off the seeds with the finger and behold, silver dollars! They make beautiful material for winter bouquets.

One year we saved one large tree-like plant, about 18 inches tall. At Christmas time, we placed the trunk in plastic clay and fastened it to a glass dish filled with marbles to give it weight. Christmas lights were ar-



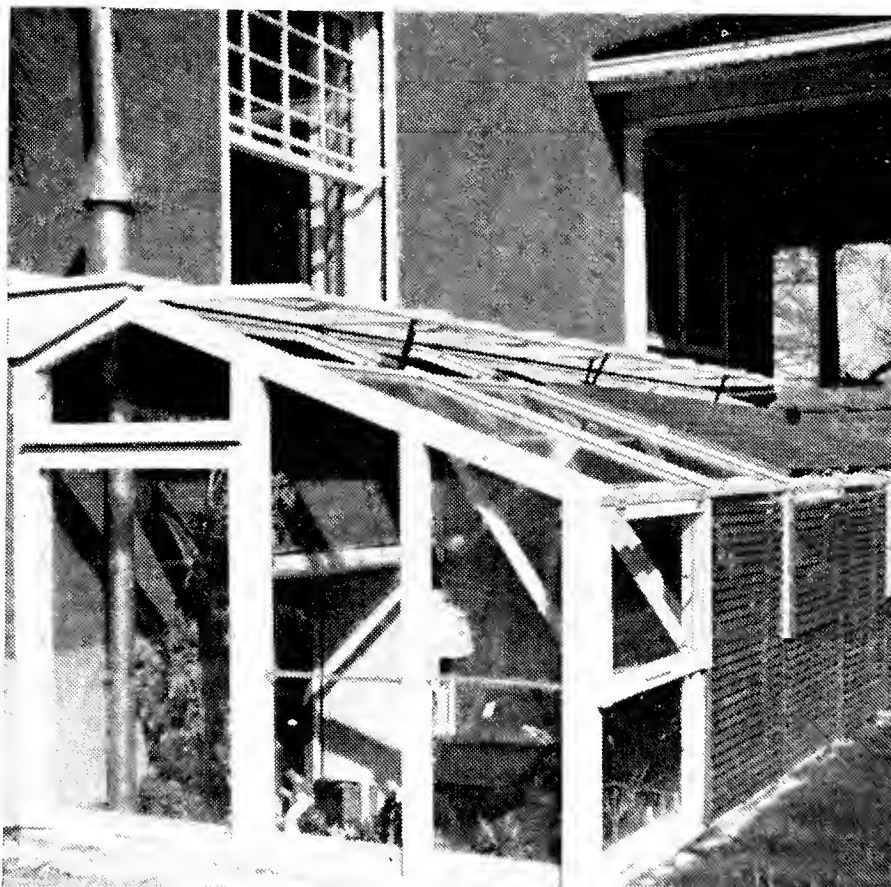
*Use of sun lamp by Mrs. P. G. Merilatt. Notice closer plant has some burned leaves.*

ranged in the marbles and the entire dish covered with cotton and snow. We used blue lights and blue plastic buildings. The reflection of the lights on the silver parchment-like pods gave a holiday effect and was quite unusual for our buffet decoration.

## ROSE SOCIETY CHANGE

The Denver Rose Society will change their meeting place from Horticulture House to Room 100 City and County Building. They have outgrown our place with their increased membership.

*Unique greenhouse constructed by Mrs. Earl Davis.*



# BEES, FLOWERS AND PLANT BREEDING

By DR. S. W. EDGECOMBE

Head and Professor of Horticulture, Utah State  
Agricultural College, Logan, Utah

**B**EES are one of the most important insects that we have available to pollinate flowers. Every plant that produces seeds has a flower. These flowers are of various kinds. There are flowers that have only female parts which are called pistillate flowers. Others have only male parts and are termed staminate flowers. Flowers with both female and male parts are termed perfect or complete flowers.

Before seeds may be formed, it is necessary for the pollen grains (which contain the male sex cells) to be transferred from the male parts that bear them (anthers) to the tip of the stigma of the style of the female flowers. This process of transferring the pollen from the anthers to the stigma of the female flower is called pollination.

Pollination is of two types, self and cross pollination. When the pollen is transferred from the male part of a flower to the stigma of the same flower or to another flower on the same plant the pollination is referred to as self-pollination. Sweet peas are a good example of a self pollinated plant. Usually the flowers are pollinated in the bud stage before the flower opens. The other type of pollination is when the pollen is transferred from the anther of one flower to the stigma of another flower on another plant. Cross pollinated plants may be self pollinated but with many plants the pollen when placed on the flower on the same plant is unable to grow at the normal rate down through the stigma. Hence when the pollen is placed on the stigma of the flower on the same plant in competition with pollen grains from flowers of another

plant the foreign pollen grows much faster down the style and fertilizes the egg cells. A good example of a cross pollinated ornamental plant is petunias.

The transfer of pollen from the anther to the stigma of flowers is performed by three agencies with cross-pollinated flowers, wind, water and insects. Usually, the plants that have inconspicuous small flowers produce large quantities of light weight easily air borne pollen. When this pollen is released it is carried by air currents to the stigma of the other flowers. This method of transferring pollen is very hit and miss and a great deal of pollen is deposited on many objects other than stigmas. Hay fever victims suffer from this indiscriminate distribution of pollen. Some of the wind borne pollen grains travel great distances. The common garden beet is one that has very light pollen. It has been known to be carried as much as twelve miles from the original flower and up to two miles high in the atmosphere. Garden beets, field and sweet corn are good examples of wind pollinated plants.

There are only a few plants that have the pollen transported by water. Probably the plants of most interest to gardeners that fall into this class are the water lilies. Here the pollen is released onto the surface of the water which carries it here and there. In course of the random movement of water some of the pollen is carried to the stigma of another flower.

There is a large group of very important plants that are insect pollinated. Many of our commercial fruits, vegetables, legumes, ornamental trees, shrubs and flowers are pollinated only

by insects. Some plants like the capri figs can only be pollinated by one certain type of insect which crawls inside and while it is busy in there in its own activities it pollinates the flower. Most of the other plants may be pollinated by many different types of insects.

The honey bee is of tremendous interest to the people interested in agriculture. The reason is that it is an insect that can be managed by man. Its numbers may be increased fairly rapidly and it may be moved from place to place as the occasion may demand. Now-a-days we have itinerant beekeepers who make a practice of moving their bees sometimes hundreds of miles to pollinate crops as the season requires. When the pollination is completed they will move their bees out of that region to another region where the same process is repeated with another or similar crop.

Under conditions where there is a large area of undisturbed waste land usually there is generally an ample supply of wild pollinating insects. But in areas of concentrated agricultural acreages of one crop and where the waste land has been reduced to a minimum, native pollinating insects have no place to live. Consequently, they become fewer and fewer and the crops that require insect pollination yield smaller and smaller crops. This phenomenon has been observed with many crops. Red Clover is a good illustration of a plant that was largely dependent on one wild pollinating insect. In this case, the insect was the bumble bee which required an undisturbed nesting area for its continued existence. Obviously in concentrated agricultural areas less and less undisturbed waste land is available to this insect. In Iowa and similar areas, yields of Red Clover seed per acre have gone down to ridiculously small quantities.

Fortunately, the honey bee may be used to bridge the need for pollinators for this and similar crops.

For a long time fruit growers have known that flowers of apples, pears, and other fruit must be insect pollinated and that bees would do the job very satisfactorily.

Studies have indicated that at least 85 percent of the insects observed on fruit flowers are honey bees. Additional studies have been made in recent years which indicate that the honey bee will pollinate certain legumes such as alfalfa and thus result in good seed yields. Alfalfa and some of the other legumes are not preferred honey plants for bees but if enough bees are concentrated in an area very good seed yields can be secured from the plants. During the past five years, tremendous strides have been made in techniques of handling honey bees in alfalfa seed yields. They have greatly increased yields although the bees in some instances have not been able to make very much honey and beeswax. Here we see the ultimate in insect pollination. The insect is being used just like a workhorse or cow. Man is managing the insect so that its primary purpose is not being entirely fulfilled but instead is doing essential work for man.

Since animals are dependent on plants for their raw food materials, it follows that all agriculture in the final essence is dependent on insect pollinated plants. Truly the statement "Bees are the key to prosperity in Agriculture" is one that needs attention, because it is true. There can be no crops of any economic value with many of the commercial insect pollinated crops without honey bees, and even with the non-insect pollinated crops, their high yields cannot be maintained without insect pollinators.

In the field of horticulture, there are many important uses of honey bees. Fruit growers were one of the earliest groups in agriculture to go all out in the use of bees as pollinators. Many years ago, the research workers of this country and other countries found out that apples, for example, would not set any fruit if the trees were covered with cheesecloth which excluded all insects. Covered trees with bees in them will not set fruit. The flowers on a single apple tree are all the same genetically and while the bees will carry pollen from one flower to another the final result is self pollination. Since many apple varieties require cross pollination this self pollination is of no value. However, if branches with bloom on them of another good pollinating variety are introduced into the covered tree, the bees will work them and carry the pollen from them to the other flowers. The result is a crop of fruit. This simple experiment is the basis of present day recommendations for many fruits.

Now I would like to turn to a special phase of pollination. Plant breeders who are out to produce new varieties of plants take the pollen from a flower and place it on the stigma of the same or another flower. We term this hand pollination. It is the basis of most plant breeding programs. The operation is a simple one and anyone with common ordinary intelligence can be trained to do a good job with a small amount of training.

In recent years, plant breeders have observed that when the pollen is placed on flowers of other varieties the plants produced from the seed are larger and more vigorous and many times heavier yielding than either one of the parents. This increased vigor in the crossed plants is referred to as hybrid vigor. Sometimes, the hybrid vigor is a result of more than one

cross. This principle of hybrid vigor has been used in the production of hybrid field and sweet corn with striking results. Yields have been greatly increased, ears are now borne at a desired height and many other characters have been incorporated into the varieties that are economically beneficial.

About 1944, a beginning was made in the production of hybrid vegetables. They were offered by seed houses to the amateur and commercial gardeners. Some of these hybrids are hybrid cucumbers, muskmelons, tomatoes, watermelons, onions, peppers, and eggplants. There is no question about the value of these new hybrid vegetables. In general they are heavier producers, have better quality and many times possess resistance to certain diseases and other environmental conditions. One difficulty in their production was and is the high cost of production of the seed. At the beginning all the seed was produced by hand pollination.

Some of the seed companies wondered if bees could not be used to pollinate the flowers instead of doing it by hand. Maybe the bees could be used and thus reduce the pollination costs.

It was tried and techniques have been worked out so that today bees can be used to produce hybrid cucumber, watermelon, muskmelon, and onion seed. Costs have been greatly reduced. With lower costs the general public is more likely to use these improved varieties with greater returns to them. I would urge you to try these new hybrid vegetables. They will please you and I am sure that better and better hybrid vegetables will be available in the future.

When one uses bees to cross pollinate these vegetables, it is necessary to plant the two parent lines or varieties in the field in a certain planting arrangement. Sometimes, one row of



the male parent is planted and then two, three or more rows of the female parent. Bees in ample numbers are placed at one side of the field. As soon as the flowers appear on the female variety, all the male flowers are removed by hand labor.

Each day or as often as necessary the male flowers are removed from the female parent. Nothing is done with the male or female flowers on the male parent. The bees carry the pollen from the male parent to the female flowers of the female parent. Seed is saved from these cross pollinated flowers. All other flowers and their resulting seed is thrown away. Under such a system of seed production the seed grower has the costs of removing the male flowers (called defloration) and tagging or marking the cross-pollinated flowers on the female parent.

In an effort to avoid these costs and increase the yields of cross-pollinated seed, seed growers are turning to male sterile plants. Male sterile plants are ones that have flowers that do not produce pollen that will germinate. Male sterile plants have been found in tomatoes, cucumbers, muskmelons, onions and in a number of other genera.

Whenever, this character of male sterility is placed into a desirable female plant, no defloration and tagging is necessary. All that will be necessary in the production of hybrid seed will be to plant the male sterile female parent and the male parent in the proper planting design, place bees in the field and harvest the seed from the female plants. This is now an accomplished fact with onions and male sterile plants are being used to produce commercial hybrid onion varieties. In a few short years, most of the onion varieties that we will grow will be hybrids produced by this method. Your State Agricultural Col-

lege at Ft. Collins has been active in this work with onions. Also the R. H. James Seed Company at Rocky Ford is one of the large producers of hybrid vegetable seeds.

With flowers, the same thing is true. For a number of years Red and Gold Hybrid Marigolds have been produced and sold to the public. The two parent varieties are planted in adjacent rows in the field and the bees carry the pollen from the male parent to the male sterile female plant. The female plant in this work is not entirely male sterile so there is some self pollination. That is the explanation for the small number of odd looking plants that one often sees in a planting of red and gold hybrids.

The time will come when there are male sterile plants in other flowers. Until then the hybrid flowers will have to be produced by hand pollination.

Many of you gardeners have grown double petunias and hybrid petunias. These are produced by hand pollination. The process of double petunia seed production is simple in mechanics but costly. Single petunias are used as the female parent and a homozygous double is used as a source of pollen. The pollen is transferred from the double to the stigma of the single flowers. The seed is saved from the single flowers only. An added complication in petunia production is that the male plants can be propagated economically only by vegetative reproduction. That means that the plants have to be propagated year after year through cuttings. Furthermore, the petunia is subject to tobacco mosaic. Once a plant becomes infected with the mosaic it is worthless and has to be discarded.

In view of these factors in double petunia seed production it is not surprising that the seed costs more than the same weight of gold.

The production of hybrid single petunias is much simpler. The two parent varieties are purified for their characters and then the one parent is used as the female while the other is used as the male parent. Of course it is necessary to remove the male parts of the flower on the female parent before it is pollinated. The same is true in the production of double petunia seed.

Both parents in the single petunia seed production work may be reproduced from seeds so the costs involved in single petunia seed production are much lower than in double petunia seed production.

Hybrid snapdragon seed has been produced which produces much finer plants and flowers than the parent varieties. Wherever hybridization can be carried on in flower or vegetable species without excessive costs we may well expect to see hybrid varieties replace the present day varieties.

Gardeners must remember that it is useless to save seed from these hybrid varieties. The hybrid varieties break down into the parent forms and other intermediates between the parent forms. Yields go down in the case of flowers, the plants will vary greatly in size, shape and sometimes even in color. To have satisfaction with hybrid varieties it is necessary to buy seed each year.

In conclusion, I hope that the material presented will indicate to you the fascinating and vital role that the honey bee plays in American agriculture. It has been thought of as a source of honey and beeswax. It still is a source of delicious honey but of even greater importance to us all is the pollination it does for us. As time goes on we are going to make greater and greater use of the honey bee in many specialized seed production programs.

## Christmas Cactus, *Zygocactus*

By ROSE TUGGLE

To make the Christmas cactus bloom several times a year and to keep it from dropping its buds there are several rules to keep in mind. First of all, the plant must be in a healthy growing state before any bloom can be expected. When danger of frost is over in the spring, set the pot out under a shrub which will shade it, and do not water it unless it is very dry. This is a resting period.

About the second week in August either repot it in a mixture of one part sand, one part loam, two parts leaf mold, plus about two tablespoons full of bone meal to a pot; or take off the top soil for about three inches and fill in with the above mixture. Set the plant in a cool light place (no sun) for about two or three weeks. Water thoroughly when potting, but be sure water will drain out well. After several weeks bring the plant into a strong light and give more water each week until buds begin to show. There should be no drafts or sudden drops in temperature. A closed-in sunny porch is a fine place for it. When it is through blooming, gradually withhold water until the soil is almost dry, set plant away from strong light and leave it for two or three weeks; then gradually begin giving it more water, an application of fertilizer, and more sunlight. Watch it bud again. Mine is just coming into bloom for the third time since the first week in November.

The secret is, after blooming, give the plant a few weeks of rest in a cool place with very little water. Living room temperature is too warm for it, and gas fumes will make it drop its buds.

## PERENNIALS AND BULBS

### CLASSIFIED FOR USE IN COLORADO GARDENS

KEY TO COLORS: B—Blue, W—White, R—Red, Y—Yellow, L—Lavender, V—Various, P—Pink, O—Orange, Br—Brown.

### GENERAL USE

Common yarrow	Tickseed, coreopsis	Coralbells	Flax
Monkshood	Lily-of-valley	Marsh mallow	False dragonhead
Bishop's weed	Dahlias	Hollyhocks	Balloon flower
Anchusa	Delphinium	Plantain lily	Polemonium
Anemone	Pinks or carnations	Candytuft	Bistort
Columbine	Bleeding Heart	Iris	English primrose
Butterflyweed	Gas plant	Perennial sweet pea	Buttercups
Asters, Fall	Foxglove	Blazing star	Goldenglow
Tuberous begonia	Globe thistle	Lilies	Blue sage
Plume Poppy	Desertcandle	Phlox	Pincushion flower
Boltonia	Seaholly	Lupine	Golden rod
Bellflower	Four o'clock	Maltese cross	Sea lavender
Canna	Gaillardia	Beebalm	Stokes' aster
Cornflower	Geum	Chiming bells	Meadow rue
Plumbago	Gladiolus	Forget-me-not	Tiger flower
Clematis, recta	Ornamental grass	Evening primrose	Globe flower
and davidiana	Babysbreath	Oriental poppy	Tuberose
Chrysanthemum	Sneezewood	Iceland poppy	Garden heliotrope
Painted Daisy	Sunflower	Peony	Speedwell
Shasta Daisy	Daylilies	Beardstongue	Viola

### CUT FLOWERS

Common yarrow	Lily-of-valley	Coralbells	Balloon flower
Monkshood	Dahlia	Plantain lily	Buttercup
Anchusa	Delphinium	Candytuft	Goldenglow
Anemone	Carnation	Iris	Pincushion flower
Anthemis	Bleeding heart	Perennial sweet pea	Goldenrod
Tuberous begonia	Foxglove	Lilies	Sea lavender
Boltonia	Globe thistle	Lupines	Stokes' aster
Baptisia	Seaholly	Maltese cross	Meadow rue
Bellflower	Gaillardia	Chiming bells	Tiger flower
Cornflower	Gladiolus	Oriental poppy	Globe flower
Clematis	Ornamental grass	Iceland poppy	Tuberose
Chrysanthemum	Babysbreath	Peony	Garden heliotrope
Painted daisy	Sneezewood	Beardstongue	Speedwell
Shasta daisy	Sunflower	Phlox	Viola
Tickseed, coreopsis	Daylilies	False snapdragon	

### SUNNY SANDY SOIL

Anemone	Globe thistle	Candytuft	Beardstongue
Yarrow	Desert candle	Iris	Flax
Anthemis	Seaholly	Perennial sweet pea	Bistort
Butterfly weed	Four o'clock	Blazing star	Buttercups
Asters	Gaillardia	Lilies	Blue sage
Boltonia	Geum	Phlox	Goldenrod
Cornflower	Gladiolus	Maltese cross	Stokes' aster
Chrysanthemums	Ornamental grass	Beebalm	Speedwell
Painted daisy	Babysbreath	Evening primrose	Viola
Shasta daisy	Sneezewood	Oriental poppy	
Pinks	Sunflower	Iceland poppy	

## MAY BLOOM

Columbines, B.R.  
Bellflower, BWP  
Cornflower, B  
Lily-of-valley, W

Pinks, V  
Daylily, V  
Flax, B  
Iris, V

Chiming bells, B  
Oriental poppy, V  
Peony, V  
English primrose, V

Globe flower, Y  
Tuberose, W  
Viola, V

## JUNE BLOOM

Anchusa, B  
Anthemis, Y, W  
False Indigo, B  
Bellflower, BWP  
Cornflower, B  
Clematis, WB  
Painted daisy, RP  
Shasta daisy, W  
Tickseed, Y  
Lily-of-valley, W  
Delphinium, V  
Pinks, carnations, V

Bleeding heart, P  
Gas plant, WP  
Foxgloves, RPW  
Four o'clock, V  
Gaillardia, YR  
Geum, R  
Babysbreath, W  
Daylilies, V  
Coralbells, RP  
Hollyhocks, V  
Iris, V  
Sweet pea, P

Lily, V  
Flax, B  
Lupine, V  
Chiming bells, B  
Forget-me-not, B  
Oriental poppy,  
POR  
Iceland poppy, V  
Peony, V  
Beardstongue, V  
False dragonhead,  
WL

Balloon flower, WL  
Polemonium, BW  
English primrose, V  
Buttercup, Y  
Goldenglow, Y  
Globe flower, Y  
Garden heliotrope,  
B  
Speedwell, B  
Viola, V

## JULY BLOOM

Anchusa, B  
Anthemis, YW  
Tuberous begonia,  
WPR  
Plume poppy, W  
Bellflower, BWP  
Cornflower, BP  
Clematis, WB  
Cushion mums, V  
Painted daisy, RP  
Shasta daisy, W  
Tickseed, Y  
Dahlia, V

Delphinium, V  
Pinks, carnations, V  
Bleeding heart, P  
Foxgloves, RPW  
Globe thistle, B  
Desertcandle, WP  
Seaholly, B  
Four o'clock, V  
Gaillardia, YRBr  
Geum, R  
Gladiolus, V  
Ornamental grass  
Babysbreath, WP

Daylily, V  
Coralbell, RP  
Marsh mallow,  
WPR  
Hollyhocks, V  
Plantain lily, WL  
Candytuft, W  
Sweet pea, P  
Lily, V  
Flax, B  
Lupine, V  
Beebalm, RPL  
Evening primrose, Y

Iceland poppy, V  
Beardstongue, BRW  
Phlox, V  
False dragonhead,  
PL  
Balloon flower, WL  
Polemonium, BW  
Bistort,  
Buttercup, Y  
Goldenglow, Y  
Tiger flower, Y  
Viola, V

## AUGUST BLOOM

Anchusa, B  
Anthemis, YW  
Asters, V  
Tuberous begonia, V  
Plume poppy, W  
Boltonia, WP  
Bellflower, BWP  
Canna, RYP  
Cornflower, BPW  
Cushion mums, V  
Painted daisy, RP

Tickseed, Y  
Dahlia, V  
Pinks, carnation, V  
Bleeding heart, P  
Globe thistle, B  
Desertcandle, WP  
Seaholly, B  
Four o'clock, V  
Gaillardia, YRBr  
Gladiolus, V  
Sneezeweed, Y

Sunflower, Y  
Daylily, V  
Marsh mallow,  
WPR  
Plantain lily, WL  
Candytuft, W  
Blazing star, Pu  
Lily, V  
Maltese cross, RW  
Beardstongue, BRW  
Phlox, V

False dragonhead,  
WL  
Bistort,  
Goldenglow, Y  
Pincushion flower,  
BW  
Goldenrod, Y  
Sea lavender, L  
Viola, V

## SEPTEMBER BLOOM

Monkshood, B  
Anchusa, B  
Anemone, P  
Anthemis, YW  
Butterflyweed, W  
Aster, V  
Tuberous begonia,  
WPR

Boltonia, WP  
Canna, RYP  
Cornflower, BWP  
Plumbago, B  
Cushion & English  
mums, V  
Dahlia, V  
Delphinium, V

Bleeding heart, P  
Four o'clock, V  
Gaillardia, YRBr  
Gladiolus, V  
Sneezeweed, Y  
Sunflower, Y  
Daylily, V  
Marsh mallow,

WPR  
Maltese cross, RW  
Goldenglow, Y  
Blue sage,  
Pincushion flower,  
BW  
Sea lavender, L  
Viola, V



## SHADE AND PART SHADE

Monkshood	Gas plant	Lupine	Pincushion flower
Anemone	Fox gloves	Beebalm	Sea lavender
Columbine	Geum	Chiming bells	Tiger flower
Baptisia	Daylilies	Forget-me-not	Globe flower
Tuberous begonia	Plantain lily	Peony	Tuberose
Bellflower	Iris	Polemonium	Garden heliotrope
Lily-of-valley	Lilies	English primrose	Viola
Bleeding heart			

## HEIGHT OVER 36"

Anchusa	Gas plant	Daylilies	Goldenglow
Asters, fall	Foxglove	Hollyhocks	Blue sage
Plume poppy	Desertcandle	Perennial sweet pea	
Dahlias	Ornamental grasses	Blazing star	

## HEIGHT 12 TO 36"

Yarrow	Chrysanthemums	Gaillardia	Lupine
Anemone	Painted daisy	Geum	Maltese cross
Anthemis	Shasta daisy	Gladiolus	Bee balm
Columbine	Tickseed, coreopsis	Babysbreath	Chiming bells
Baptisia	Dahlia	Sneezeweed	Evening primrose
Tuberous begonia	Delphinium	Daylilies	Oriental poppy
Bellflower	Bleeding heart	Plantain lily	Iceland poppy
Canna	Globe thistle	Iris	Peony
Cornflower	Seaholly	Lilies	Beardstongue
Clematis	Four o'clock	Phlox	Buttercup

## HEIGHT UNDER 12"

Bishop's weed	Lily-of-the-valley	Coralbell	Tigerflower
Anchusa	Pinks, carnations	Iris	Viola
Butterflyweed	Ornamental grass	English primrose	Tuberose
Plumbago			

## ANNUAL NATURE LEADER'S INSTITUTE

The Nature Leader's Institute has been planned for May 1 to 17 this year. The first session will be held at the Evans School, 11th and Acoma, at 7:30 P. M., Thursday, May 1. Mr. A. W. Kellerman will assemble a group of speakers and exhibits, which will tell and show how to interest children in the beauties and wonders of Nature.

There will be an all day mountain trip Sunday, May 4, in the Coal Creek area. Doris Weith and Elizabeth Hansen will arrange the demonstrations and games. The time will be 9 A.M. till 4 P.M.

On Saturday, May 10, will be held a half day session at City Park, with George W. Kelly, Ferd Kleinschnitz

and others demonstrating techniques for showing children some of the interesting things around them. The time will be 1 to 6 P.M.

The last session will be from 1 to 9 P.M., afternoon and evening. The location will be along Clear Creek east of Golden. Ruth Wheeler and Ruby E. Greiser will arrange demonstrations in outdoor craft and campfire programs. Bring a supper that can be quickly prepared.

Registrations should be made at Horticulture House well in advance so that arrangements for sharing transportation can be made.

Any adult or older junior leader of children's groups or those interested in sharing their experiences in nature teaching practices are invited. There will be no provision for younger children.

## DORMANT SPRAYS FOR SCALE INSECTS

From The Shade Tree Digest  
As Presented by

### Swingle Tree Surgery Company

This month is not too late to begin preparations for the annual campaign against the insects that infest and injure valuable shade trees. First on the list of pests against which control measures should be directed are the sap-sucking scale insects. This group includes the European elm scale, oyster-shell scale, scurfy scale, San Jose scale, cottony maple scale and others. Almost all shade and fruit trees, and many shrubs as well, are attacked by one or more species of scale insects.

Most scale insects are easily controlled by dormant sprays. These sprays must be applied in the early Spring when the temperature is above

freezing and before the leaf- and flower-buds open. With sap-sucking insects, such as the scales, the sprays applied must come in actual contact with the insects to provide effective control. This can be accomplished if the dormant spray material is applied at the proper time by experienced operators with adequate equipment. Since the season for applying dormant sprays is usually short, arrangements for spraying your trees should be made early.

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## A LOOK INTO THE SUMMER

In order that more members of Colorado Forestry & Horticulture Association may take advantage of the longer than overnight trips, the Committee on Outdoor Activities has arranged more than one trip of from 4 to 8 days and arranged them to occur all through the vacation months. Here are some of the interesting ones, subject to slight changes in dates, and some with dates to be set.

April 25-29 (Friday to Tuesday)—Lodore Canyon.

May 23-June 1 (Friday to Sunday)—Goblin Valley, Cathedral Valley and Natural Bridges of Southeastern Utah and Colorado.

June—Two days—Date not set. Climb of Silverheels near Fairplay.

July 3, 4, 5, 6 (Thursday, P. M.)—Lost Lake, going in from Glen Haven shelter and food packed in by horses. Riding horses available for those who wish. Lake near Mt. Dunraven and Mt. Dickerson, other alpine lakes near; good fishing locale.

July 12-20—Snowmass Lake. Fishing is good here, too. Pack taken in by horses. Riding horses available for this trail, also. Climb of Mt. Sopris on Crystal River second weekend; move camp for this.

August—Date not set. Wheeler National Monument.

August—Mt. Meeker from Allen's Park.

August 30, 31 to Sept. 1 (Labor Day)—Gilpin Lake. Base camp for fishing, hiking and photographing Big Agnes Basin Primitive Area, Routt National Forest northeast of Steamboat Springs.

Sept. 6, 7—Engelmann Peak, across to Woods Mountain, over the skyline. Exit at Jones Pass.

From March to October—Trips to enjoy the usual display of prairie and alpine flowers and trees into the fall colors of Colorado. After that, back to skis and snowshoes for one day trips into the deep snow.

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# TAMING YOUR CLAY SOIL

By M. WALTER PESMAN

**A**NOTHER miracle comes from the chemical laboratory: Krilium. It makes the soil workable that used to be tight and lumpy and hard to spade. It does mechanically what organic manure does over a longer period of time in the way of making a soil friable. You can use a few pounds of this chemically-made resin product, sprinkle it on the ground and do in 24 hours what otherwise would take a couple of months. While it does not add any fertility, it is said that one pound of krilium equals 500 pounds of compost or manure, as far as the workability is concerned.

What it does is to change the soil structure: it creates large aggregate particles which will admit more soil air and will allow plant roots to penetrate and get at the water film around them. That, in turn, means that they can get at the soil solution, containing the nutrients.

Don't ask me just how it is done. Krilium is called a synthetic poly-electrolyte, and the electrically charged metal particles (ions) seem to find their electrical mates through krilium. To put it very simply: krilium resin is a synthetic replacement for the natural polysaccharide or polyuronide resins derived from humus. You see, that explains it all. Or does it?

Anyway, the experiments taken with it so far, have had marvelous results. It has good possibilities in improving soil structure, in erosion control, in making available the necessary minerals in the soil.

Monsanto Chemical Company of St. Louis, Missouri, is ready to put it on the market in the near future. Quantity production is promised in late 1952 or early 1953.

As was the case with 2-4-D there

will be unforeseen difficulties that may show up as krilium works its miracles. And, wonderful as it is, do not abandon your compost pile in anticipation: you'll need both.

In the meantime it is fascinating to consider how this may be the beginning of an entirely new possibility in "taming your soil."

---

## A HACKBERRY

On 14th Avenue and Lincoln Street has the bark of a Mississippi hackberry, and I wonder if it could be that variety which usually is not hardy here. Perhaps some of our botanical wizards such as Dr. Shubert, Walter Pesman, George Kelly, would set me straight on this.

The bark is certainly different from the supposedly Western Hackberry on the East side of the Greek Theatre. Perhaps Martha McBrayer, who comes from that southern country and very likely was raised under a *Celtus Mississippiensis*, will tell us about it, maybe even write an article on the aforesaid Celt Miss. for the Green, or otherwise discolored Thumb. (Pun plagiarised from previous toastmasters.) Bill Lucking, the man who says "if it grows, we can grow it" may want to pick some of the seed which is still hanging on the said C. M., if it should prove to be a C. M.

DEBOER.

---

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## ANYONE CAN GROW ROSES

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Roses for cut flowers, climbers for fences and walls, tree roses for accent, roses in beds and singly, roses for trellises, pergolas, arbors, garden arches and as screens and flowering hedges—there is hardly a place where the beautiful rose will not fit on the home grounds. There are roses which flower singly and those which bloom in large clusters of brilliant blossoms. There are even small specimens for the rock garden; miniature roses to wear in a man's lapel, or standard sizes for milady's corsage.

Possibly these are the reasons that roses are so popular. On top of their loveliness, they can be used to advantage in all sorts of ways.

When we order roses most of us want to have a lot of good blooms that we can use for all purposes. Most of us want *splashes* of color in the garden, home, and elsewhere on the property. The best Hybrid Tea and Floribunda varieties will give you such color in abundance.

Here are a few simple rules provided by the American Association of Nurserymen to help guarantee your success with roses:

1. Buy good two-year plants from a real nurseryman you know. Don't try to pick up "bargains" unless you know with whom you're dealing. The difference between the best and the cheapest is very little and there's no sense in digging all those holes in the ground unless you're going to put healthy plants in them. Plant as soon after purchase as possible. If faced with a delay, heel them in.

2. Select the site for a rose garden carefully. Roses are sun lovers. They like a site with good air drainage, but protection from constant strong winds, so don't plant in a location that is always windy. Water at the roots, preferably. Although overhead sprinkling is satisfactory in dry, arid climates, where the plants dry off quickly. Avoid planting in the shade, although shade for the hottest part of the day in extremely hot locations is desirable.

3. Roses will thrive in almost any soil, light or heavy. If the soil is very light, humus can be added. Good drainage is important. Roses will not thrive in wet, soggy soils.

4. When planting, dig the hole deep enough so that the base of the branches is even with, or an inch or or so below the surface. The bud should be barely covered with soil when the rose bed is leveled. Spread the roots evenly, slanting them downward. A handful of damp peat moss around the roots is beneficial. Bone-meal can also be placed in the hole before planting. Press the soil firmly about the roots. After planting, a mulch of well-rotted manure, peat moss or decomposed leaves will help conserve moisture.

5. If purchased from an up-to-date nurseryman newly planted roses will need little pruning. Normally there should be 2 or 3 strong canes left on the plant, cut back to 8 or 15 inches.

6. Feed about a month or six weeks after planting with a reliable rose food in accordance with directions.

Select your varieties for color, vigor of growth and abundance of bloom.

It is a good idea to consult your local nurseryman on varieties or else order from the catalogue of a dependable nursery, which gives color and description of the variety.

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# LETTERS FROM KATHLEEN MARRIAGE TO RUTH NELSON

## SPRING, 1951, EXCERPTS

[K. M. participated in the 1951 International Rock Garden Conference held in London and Edinburgh and incidentally had a royally good time visiting friends, relatives and gardens in Britain and Ireland.—R. N.]

**I**N Der Lingus plane between Shannon and Dublin, 4 p.m., 12th April. The most striking thing about the airport at Shannon is its lack of noise and bustle; checking baggage, going through customs are affairs for leisurely enjoyment and pleasant conversation in the softest voices. In the offices at the airport were some lovely varieties of narcissus, especially big bowls of "Fortune". And big pots of polyantha primulas, mostly reds, in the customs and passport offices. In the garden lots of narcissus in bloom as well as arabis double and primroses. We're going over the most intricate patchwork pattern of fields, bright green and peat brown separated from each other by green hedges. Lots of neat little white farmhouses.

London—April. Banks of flowers well planned and arranged over the windowline of shops and in window boxes of buildings are lovely here. Yesterday we went to see the Royal Horticulture Gardens at Wisley. I was especially interested in the trial section of daffodils. I find from Col. Stern who originated some of the best of 'em that they are—or will be—available in U.S.A. from Clint McDade. There were in one exhibit at the Rock Garden Show six pots of *Aquilegia laramiensis* in bud, no flowers. Some of the retaining wall gardens here are glorious, also espalier fruits in bloom. Many interesting people at the conference, several had been with me in the mountains of Colorado. They seemed to like my kodachromes of Rocky Moun-

tain alpenes. They were enthusiastic and eager to ask about the plants shown. I'm starting in the morning to drive to Edinburgh with Helen Fox.

Scotland — early May. Edinburgh is very lovely. They don't grudge enough space in busy shopping areas for parks, trees, grass and flowers. And it is a populous busy place. I'm writing this on a hill overlooking the city; across the street and higher is where Mary Queen of Scots had her exciting escapades. It was a lovely week-end at Aviemore up in the Highlands, delightful people, beautiful house and lovely country. Deep springy moss in the birch woods. Grand old gnarled Scotch pines among them. You'd have a great time here with birds. A whole big chorus of different songs at once—the air full of it. Jack Drake has a fascinating lot of very well grown plants. He won the "Large Gold Medal" at the Glasgow Show for his exhibit of Alpines, beautifully staged. He had a lovely group of *Mertensia coriacea* (seeds from Pikes Peak) in flower and a good *Polemonium confertum*.

So far I haven't gone hungry though meat seems scarce. It's so cold that I drink gallons of tea and eat a lot of bread (which is good). Hotels have enough and Drakes' have their farm with a farmer in charge so they have eggs, butter and chickens in quantities unknown in England. Paper is the acute shortage at present, so—no more for now.

[More from these letters next month.]





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### IS THERE CHICKWEED IN YOUR LAWN?

It does not let up even in winter, you know. "One of Nature's most prolific and persistent plants." As soon as the soil is soft enough, pull or dig the weed and seed over with grass seed. Its chance is small on a good turf.—H. F.

**HYDRANGEA HILLS-OF-SNOW**  
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#### A SHRUB FOR SHADE

A fine July and August bloomer, still blooming into September. A great old-fashioned favorite, adding effects of light and brilliance to the late garden. To keep the fine large white balls of bloom looking the best, give this plant a constantly-moist soil. As it flowers on the new seasons growth it can be cut down any time before growth starts. (Right now is time if not cut down before.) This pruning will keep plant within bounds and make extra large heads of bloom.

H. F.

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### A GOOD IDEA

The Men's Garden Club of Denver, at its February meeting, voted to make it obligatory for all its members to be members of the Colorado Forestry and Horticulture Association. Mr. Everett Nord, president of the Club, said that the Club felt that it should cooperate with and help finance Horticulture House.

"Horticulture House helps all gardeners," said Mr. Nord, "and we feel we should make every effort to back it up. It should be the coordinating agency for all the garden clubs, men's and women's, and we hope that others will follow our example."

Are you going to construct a rock garden this year? Remember it need not be extensive to be interesting. A small space with a few choice plants is better than acres filled with commonplace varieties. Select the finest from the list of ground covers of last month's issue: they can be used in the rock garden—not all but most of them—some pretty pinks, choice Sedums, Saxifrages, Aubrietia, a touch of alpine Poppies. So many other rock plants can be chosen and not have the whole rock garden covered with Cerastium tomentosum and Creeping Phlox or overrun with one or two kinds of quick-spreading, common Sedums.—H. F.

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## APRIL CARE WILL PAY, WITH BETTER FLOWERS IN MAY

**T**HE chief garden jobs this month should be the preparation of soil and transplanting of woody plants. Removing hopelessly poor soil, bringing in new good soil, adding humus to soil before planting and thoroughly working up soil by spading, plowing or rototilling should pay big dividends in the future growth and health of plants.

Whenever the soil is not frozen and is dry enough is the time to finish up the transplanting of dormant trees and shrubs. Perennials may also be moved and borders given their yearly remodeling. The greenness of your thumb is indicated by the care that you give plants while they are out of the ground. Don't let wind or sun dry out tender roots for that will make it much more difficult for the new plant to become established.

There may be a great variation in the weather day by day in this month so do not let a few warm, spring-like days fool you and cause you to take off the protecting coverings and mulches. Sudden changes in temperature can cause as much "winter kill" now as might have happened all winter. Clean up the rubbish and foreign material in the garden but don't be in too big a hurry to uncover things.

Lawns may be planted now if you have first **THOROUGHLY** prepared the soil. The grass seed will be slower to come now but there will not be the difficult problem of constant watering that occurs when grass seed is planted in hot weather. Remember that your first concern is with keeping the surface of the soil moist until the seed is up, then later watering should gradually be less frequent and more thorough so that the soil is kept moist deeper. This will encourage the roots to go deep and avoid the usual damage to shallow rooted plants in hot weather.

Check your trees and shrubs for broken or dead limbs. Any necessary pruning can be done now with the reservations that only emergency work should be done on Maples, Walnut and Birch as it will cause bleeding, and most of the extensive work on shrubs should be held until just after they have bloomed to avoid losing the current season's bloom.

There may still be time to apply a dormant spray to control alternate-host aphids on Snowball, Dogwood and Euonymus and oystershell scale on Dogwood, Lilac and Cotoneaster. Check with your arborist to see if he can safely apply the dormant lime-sulphur spray to help control spruce gall aphids on spruce and spider mites on junipers.

Junipers, especially the native *J. scopulorum* should be inspected frequently to catch the first invasion of juniper aphids which have damaged a large proportion of these trees in the last few years. Spray with any contact spray if they are found. It is very important to catch them early before they have time to build up a large population and severely damage the trees.

If there are junipers (cedars) and hawthorns close together you can expect, sooner or later, to have some Cedar-hawthorn rust or galls. When conditions are favorable these galls may seriously disfigure your trees. They can be controlled by spraying at the proper time with the proper chemicals. Check with your arborist as this is a technical operation, requiring great care.

The proper time to fertilize and the proper material to use is a problem

to many gardeners now. If reasonably good soil has been properly prepared with humus there should be no annual problem of fertilizing, but it is regrettable that a large proportion of lawns and gardens have been planted in poor soil which must have the addition of fertilizer to produce healthy plants. Remember that nothing that you put on the SURFACE of the soil can take the place of that which should have been WORKED INTO the soil previous to planting, but you now must just do the best that you can under the circumstances. If there is not a good mulch on the surface and it is early in the season before you really want to stimulate growth, probably an organic fertilizer like Peat-and-sheep or compost will best answer the problem. Later when the lawn or plants need a quick pick-up the quickly available chemical fertilizers will be valuable.

Where much organic material is applied which has not been completely decayed there is likely to be a robbing of nitrogen from the soil, causing a temporary starvation of the plants. When this is noticed it is well to apply a light application of a fertilizer high in nitrogen to hold over the plants until the nitrogen is again released by decay and bacterial action in the compost.

April usually provides enough showers to give a good start to the May flowers, but if it becomes dry between rains it may be necessary to get out the hose and soak things. Do not make the common mistake of suddenly starting regular watering after the garden has been neglected all winter. Only water WHEN NECESSARY whether that is January, August or June. Too frequent watering now may cause the plants to form a shallow root system which will cause trouble in the hot summer days.

Get all the garden tools and equipment ready for the annual program of Spray—cultivate—weed—water. Hoses, lawn mowers, sprayers and hand tools should be checked over and repaired when necessary. Wooden structures may need a new coat of paint. Walks and platforms may have sunken places that need levelling up.

As the first cheerful little spring bulbs bloom start your garden calendar. Make notes of work done and work needed at a later date. This information will be very valuable to you in later years when you may have forgotten just when certain things bloom or what the combinations of flowers were that gave the best effect. You can make a nice scrapbook of this by adding pictures and clippings of seasonal plants and garden work.

### Annual Plant Auction

It's time for that fun fest the Annual Plant Auction! It will be held at the Horticulture House Parking Lot at 1355 Bannock Street on Saturday, April 19th, 12:30 P.M.

There will be a plentiful supply of trees, shrubs, roses, perennials, evergreens, seeds, fertilizers and garden tools all of which will be donated by the local Nurserymen, Seed Stores, Landscape Gardeners, Tree Trim-

mers, and Friends of Horticulture House.

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May, 1952

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Vol. 9

MAY, 1952

No. 5

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*Sketch on front cover made especially for this issue by Claude Hansen, and sketch  
on back cover made by Edmund Wallace.*

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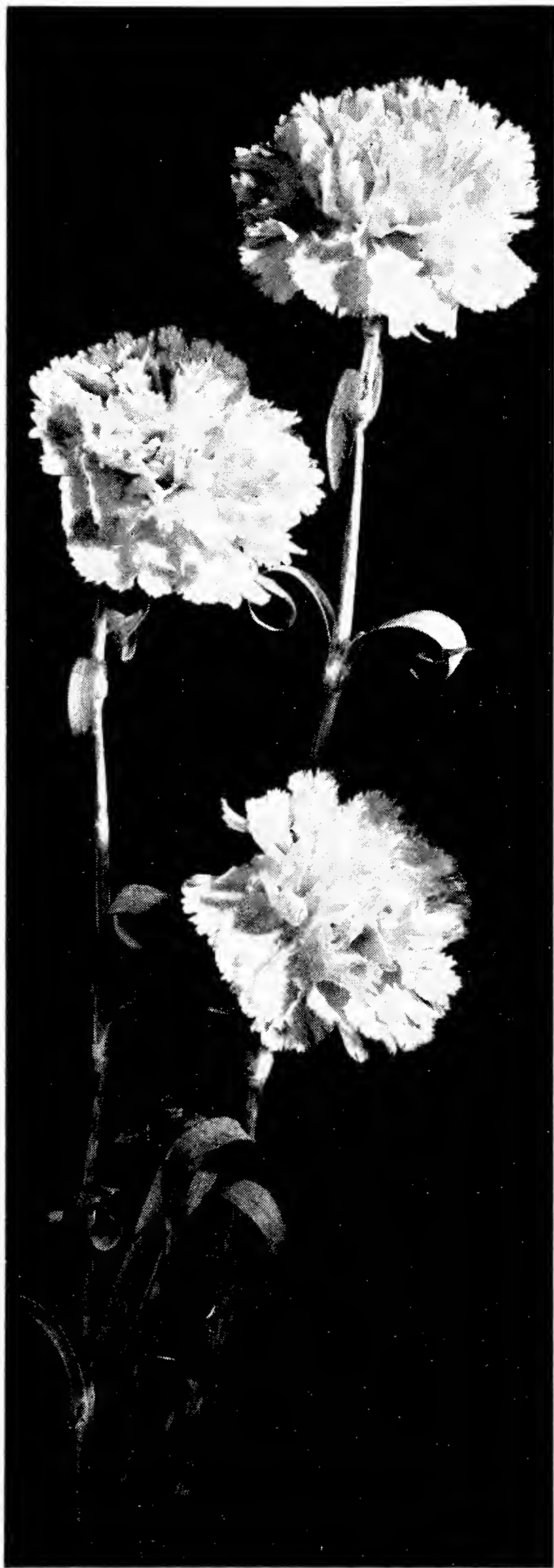
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**THE COLORADO FORESTRY AND HORTICULTURE ASSOCIATION**

**1355 Bannock Street**

**• Denver 4, Colorado •**

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Colorado Forestry and Horticulture Association

Organized in 1884

*"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."*

OFFICERS

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Editor.....George W. Kelly

APRIL SCHEDULE

- May 4—Sunday. Tour of Boulder for early tulips, flowering shrubs, and trees. Led by Walter Pesman. Leave H. H. at 8:00 for Boulder, make tour and then join Nature Institute group in Coal Creek at lunch.
- May 8—Do you know your wild flowers? Mrs. E. Nussbaum will show her kodachromes here at H. H., Thursday evening at 8:00.
- May 11—Wild flower trip to Franktown, Colo. Leave H. H. at 8:00.
- May 18—Hamalin Gulch across to Central City, 10 mile hike. Cars or bus will pick up at Central City. Leave H. H. at 7:45 A.M.
- May 22—Thursday, 8:00 P.M. Herbert Gundell recently returned from trip to Europe will talk on "Are we on our way to a peaceful Europe?"
- May 25—Flower trip to Hassell Lake at headwater of Woods Creek up Urad Mine Gulch. Led by Anna Timm.
- May 30, 31 June 1—Climb of Silver Heels, led by Mary Lou Cox and Lois Norton. Leave from H. H.
- June 8—Trip to Devil's Head, led by Marjorie Shepherd. Leave from Horticulture House.
- June 15-22—Wheeler National Monument. Campfire Girls and Girl Scouts, others invited. Ruth Wheeler, leader.

NEW MEMBERSHIP COMMITTEE

- Chairman—Mrs. Henry J. Conrad  
Co-Chairman—Mrs. Calvin Fisher  
Chairmen of Renewals—Mrs. R. M. Perry, Mrs. Frank McLister  
Division Chairmen:  
East—Mrs. George Garrey  
South—Mrs. J. Kernan Weckbaugh, Mrs. Edw. H. Honnen  
North—Mrs. R. H. Hughes  
West—Mrs. Helen Fowler

LOOK AND LEARN GARDEN VISITS

- May 14, 1952  
Mr. and Mrs. George Garrey  
1300 East 7th Avenue  
Mr. and Mrs. Donald Marshall  
540 Circle Drive  
Mr. and Mrs. Frank McLister  
445 Westwood (Circle Drive)  
Dr. and Mrs. Jan Schoo  
2650 Dexter Street  
Mr. and Mrs. Lewis G. Smith  
2000 S. Madison Street

WHEN YOU GO TO YOUR DOCTOR OR DENTIST

The next time, stop in at Horticulture House first and get a copy of the latest Green Thumb. Present it to your doctor to leave with the other magazines in his waiting room. See that there is an application blank in it and possibly some one will find out how useful it is while they wait and want to take out a membership.

## THE FLAME VIOLET

A. C. HILDRETH

THE family Gesneriaceae has given us some choice flowering plants. Among these are species of the genera Achimenes, Episcia, Gesneria, Isoloma, Naegelia, Saintpaulia, and Sinningia, the latter containing the well-known gloxinias. All are of tropical or subtropical origin and in our temperate-zone climate must be grown as houseplants or as conservatory specimens.



*Dr. A. C. Hildreth, Director of the Horticultural Field Station at Cheyenne.*

At present the most popular member of this family is Saintpaulia, the African violet, now often called simply "violet." Of course, Saintpaulias are not true violets and are not even members of the violet family (Violaceae). The nearest relatives of the African violet in our northern climate are the families Bignoniaceae and Scrophulariaceae. The former is represented by such familiar horticultural subjects as the catalpa tree and the scarlet trumpet vine and the latter by the snapdragon, pentstemons, and veronicas.

For many years "fans" have sought a red-flowered African violet. Breeders have introduced so-called red varieties but at best the flowers are only reddish-purple. A truly red African violet is yet to be found. Apparently the red color character does not occur in the known species of Saintpaulia. Some breeders are attempting to introduce red color into African violets by hybridizing them with red-flowered gloxinias. Success of this venture has not yet been reported.

A little-known member of the family Gesneriaceae is now being promoted as a substitute for a red-flowered African violet. This is *Episcia coccinea*. As the name indicates, this plant has red flowers and they are borne in profusion. In size, shape and character of foliage the plant closely resembles some of the reddish-leaved African violets. The cultural requirements of both plants as regards light, water, soil and fertilizer are the same but the *Episcia* will tolerate higher temperatures. This characteristic is a decided advantage in a houseplant because the average American home is too warm for best success with African violets. *Episcia coccinea* seems to be a worthwhile addition to our list of indoor plants.

This species is being catalogued in the trade as "flame violet." This name may serve to emphasize similarity to the African violet and for this reason may have some advertising value. However, it gives us yet another plant with the word violet tacked onto it and for this reason the name is unfortunate. In addition to the true violets (*Viola*) we already had the African violet (*Saintpaulia*), also known as Usambara violet; the damask violet, also known as dame's

violet (*Hesperis matronalis*); the dog-tooth violet (*Erythronium*) and the Labrador violet (*Pinguicula vulgaris*). To these we must now add flame violet (*Episcia coccinea*). With all the possibilities for selecting distinctive and appropriate names for new plants it is regrettable that the common names given horticultural subjects are frequently so confusing.

Although present emphasis is on the red-flowered species, *coccinea*, to serve in lieu of a red African violet, there are more than two dozen other species of *Episcia*, four of which have attained horticultural importance. The predominant flower color of this genus is scarlet but there are species with white and purplish flowers. These suggest interesting possibilities for hybridization.

---

## MY FAVORITE FLOWER

### Aster Frikarti, Wonder of Staffa

Too few gardeners know or grow the lovely blue Frikarti. This year was my first introduction to this delightful daisy-like flower. It is a hardy, tall growing plant, with flowers 2 to 2½ inches across and bright yellow centers. It is very undemanding and requires no special care. Does well in full sun or light shade. One of the nicest things I find about it is insects never seem to bother it.

Used in clump planting among pink flowers in a border, especially with the single petal pink annual aster, the Aster Frikarti does wonders to the most common-place garden.

This perennial blooms from June until heavy frost. The flowers are produced two or more on long stems and are wonderful for cutting. Arrangements made using this lovely blue flower and either pink roses or pink asters is well worth the trouble.

ELIZABETH BAHM.

## CHRISTMAS CACTUS

### *Zygocactus*

By ROSE TUGGLE

To make the Christmas cactus bloom several times a year and to keep it from dropping its buds there are several rules to keep in mind. First of all the plant must be in a healthy growing state before any bloom can be expected. When danger of frost is over in the spring, set the pot out under a shrub which will shade it and do not water it unless it is very dry. This is a resting period.

About the second week in August either re-pot it in a mixture of one part sand, one part loam, two parts leaf mold, about two tablespoons of bone meal to a pot; or take off the top soil for about three inches and fill in with the above mixture. Set it in a cool light place (no sun) for about two or three weeks. Water thoroughly when potting, but be sure water will drain out well. After several weeks bring plant into a strong light and give more water each week till buds begin to show. There should be no drafts or sudden drops in temperature. A closed-in sunny porch is a fine place for it. When it is through blooming gradually withhold water until the soil is almost dry and set plant away from strong light and leave it for two or three weeks, then gradually begin giving it more water, an application of fertilizer, and more sunlight. Watch it bud again. Mine is just coming into bloom for the third time since the first week in November.

The secret is to give it a few weeks of rest after blooming in a cool place with very little water. Living room temperature is too warm for it and gas fumes will make it drop its buds.

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**DON'T MISS THE  
FIRST LOOK & LEARN VISIT  
Featuring Tulips  
May 14, 1952**

# ADD SPICE TO YOUR GARDENING WITH CULINARY HERBS

By DR. MORAS SHUBERT

Botany Department, University of Denver

EVERY garden should include some flavoring herbs. This is particularly true for gardens in the Rocky Mountain region where the climate and soil seem to be just right for many kinds of these interesting plants.

No other plants will return so much for the small amount of space they occupy. And too, herbs can help on the food budget by improving the flavor and appeal of less expensive meats and other foods.

For those who have had little experience with these wonderful flavoring plants, it is suggested that the more familiar ones such as dill and sage be grown first. But the real exciting pleasure comes from trying out the less common ones.

As one of their projects, the horticulture classes at the University of Denver have planned, planted, and maintained an herb garden on the campus. Each year the perennials are tended and the annual plants are replanted.

The perennials that have given excellent results in this area are: sage, kitchen thyme and lemon thyme, lovage, tarragon, chives, salad burnet, catnip, and several kinds of mint. Rosemary, which is also a perennial, cannot be trusted to live through the winter, so it is grown in pots sunk in the soil and brought inside during the winter.

Worthwhile annuals have been summer savory, anise, marjoram, coriander, basil, dill, parsley, and borage.

This is not a complete list of herbs that are worth trying, but just those we have found are practical for high-plains growing. Why not experiment with others?

There is no mystery about growing herbs. In fact, some are almost as tough as weeds — and if German Chamomile is allowed to go to seed, you will have a weed problem. For this reason, that one is not recommended. The University herb garden flourishes on heavy clay to which a light application of barnyard manure was added when it was first tilled.

The seeds are available from most seed dealers. For specific directions for each kind, follow the instructions on the packages. But for the slow-to-germinate members of the parsley family — recognized by the parsley-like seeds — soak them in water for a few hours before planting and then mix a few radish seeds with them. The radishes spring up quickly and mark the rows until the slower species are above ground.

When directions call for planting seed shallowly — such as one-eighth inch — there is too much danger that our hot sun will dry the seeds out too fast if planted directly. The answer is to plant them, then shade the surface with a board until the seedlings appear, or else grow them in a box inside the house and transplant them. But those with deep tap roots do not transplant well.

Very little space in the garden will need to be allotted to the herbs, because in most cases four or five plants of each will satisfy the average family. Some plants, such as sage, tarragon, and salad burnet are attractive enough that they could be used for decorative plantings. Sage would be an excellent gray-leaved edging plant for a flower bed, if clipped regularly.

Most of the herbs can be used fresh,



or dried for winter use. Many of them make delicious additions to mixed vegetable salads during the summer. At least one eating establishment in the Denver area is famed for its salads which in turn get their character from home-grown herbs.

If the stem and leaf parts of the plant are used — as with sage, tarragon, summer savory, basil, thyme, lovage, parsley — frequent pinching off of the stem tips is good for the plants. Did you know that the leaves of dill are good fresh?

When harvesting stems and leaves for drying, wash them in clear water to remove dust, then shake out the excess water and hang the plants in a shaded airy place to dry. Rapid shade drying gives better color and flavor.

If premium grade sage is desired, carefully pick off whole leaves after the washing and spread them out on a screen in a warm shady place.

It is difficult to wash seeds, such as dill, anise, and coriander without losing too many, but they usually are not very dusty, since they are at the top of the plant. It might be worth trying to wash them by spreading them on a screen and turning the hose on them gently.

Nicely prepared herb products not only add much delight to winter cookery — try a few rosemary leaves on that tough old deer buck next fall, after marinating the meat in vinegar — but they also make nice Christmas gifts when attractively packaged and labelled.

So let us not only spruce-up our gardens, but spice them too.

---

## ROSES AT HORTICULTURE HOUSE

Many people have remarked that they miss a bed of hybrid tea roses at Horticulture House. There is not room for all the plants that we would

like here but through the efforts of a few good friends we now have a bed of 36 fine roses on the south side of the house.

The original idea was Mrs. Fowler's, the plants were donated by Scott Wilmore and the work of planting was done by Mrs. Conrad. Now, if those of us around the House can find time from the phone to give these plants the proper care we will have some roses to display this year. After all what is a garden without roses.

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## CONVERSATION PIECES

By MRS. JOSEPHINE E. GUTHRIE  
Fort Collins, Colo.

In your January issue of "The Green Thumb" you asked for garden experiences, etc. Conversation pieces in my garden are: Pulmonaria, hybrid Mrs. Moon, blooms the first thing in the spring. It requires shade and woods soil, comes up with the daffodils and blooms longer. The foliage is hairy, dark green spotted white and stays in good condition all summer. It is one of the last plants to freeze in the fall.

Saxifraga Crassifolia takes several years to establish itself before it blooms, but is well worth waiting for. Blooming at the same time as Mertensia, its bloom is a large ball of pink flowers. Its large light green leaves look rather tropical.

Another new one is Sidalcea. The description in the seed catalog sounded interesting so I sent for a package. Although I saved only three plants, they are very nice, the first I had ever seen and others hadn't made its acquaintance either. It blooms in June and has a long season, with new flowers coming on until fall and good foliage.

Primulas of various kinds and lilies do well for me and are outstanding in any garden.



## A COLORFUL ROSE GARDEN

AT CALDWELL, IDAHO

THE picture herewith (don't you wish it were in color?), shows what a glorious result Arthur Simpson, formerly of the Simpson Seed Company of Denver, has achieved in a few years.

Roses in an alkaline soil? Yes, a pH of 7.8 to 8.0—and that is far from neutral! A lot of mulch has been worked into the ground, as well as ammonium sulphate and iron sulphate. The result has been—well, look for yourself in the picture. Better yet, stop in on this Municipal Rose Garden of Caldwell, Idaho, when you happen to be in the neigh-

borhood, and Arthur Simpson will show you around.

In 1934 two thousand roses were planted, and the loss was only one-tenth of one percent—a wonderful record! Since then a number of new roses are being added. Among the successful roses are: Etoile de Holland, Charlotte Armstrong, Condesa de Sastago, Peace, Margaret McGredy, McGredy's Yellow, Editor McFarland, and many Floribundas and others.

Remember, the latchstring is out.

M. W. P.

## THE LOVELIEST GARDENS ANYWHERE AND JOLLY PEOPLE

More from Kathleen Marriage's Letters to Ruth Nelson  
Spring 1951, edited by R. N.

ENGLAND — May. "Did I tell you I went last week with a young cousin to the Sadler's Wells Theater? Excellent singing, acting, ballet and everything. Last evening to see Lawrence Olivier and Vivien Leigh in Antony and Cleopatra. Marvelous performance, but the excitement of the evening was when Winston Churchill with his younger daughter, Mary, and her husband came and sat just two rows behind us. When people saw him the whole house stood and clapped."

Moreton-in-the-Marsh — "Staying with the Clarence Elliots. To Henry IV at Stratford-on-Avon on the way here. Superbly done. Sat on the terrace for 'Intermission Tea' overlooking the river and a big park. 'Moreton-in-the-Marsh, Stow-on-the-Wold, Bourton-on-the-hill, by Chipping-Norton.' These were all signposts I saw within ten miles of here today. They are the loveliest old thirteenth and fourteenth century villages, few of the houses newer than 1660, tucked away in the folds of the Cotswold Hills, all built of a local stone most mellow with age. I'm having a scrumptious time here, the loveliest gardens anywhere and jolly people. Yesterday we spent the afternoon in the Mary Anderson garden. Her son greeted me ever so warmly. People here are so enthusiastic over our al-pines that they know about the things I've introduced. It feeds my ego to be so horribly important."

"Gardens everywhere are colorful with the last of the daffodils, lots of big lush polyantha primulas and auriculas, drifts of forget-me-nots, tulips, aubretia and the early rhododendrons.

Flower-filled window boxes on so many of the old grey stone buildings are attractive. The big shops are very gay in London, sometimes nearly a block long with a thick solid planting of hydrangeas on their foreheads—on a sort of balcony above the ground floor. Parks, very frequent, are lovely with vivid green grass and beech trees, larches, etc., just opening. Batsford Manor, Gloucestershire, was very fine. Lord Dulverton had a great time showing us around and so had we. Many acres of sloping shorn lawn, around the boundaries were self groupings of Japanese cherries and flowering crabs—backed by huge cypresses and Lebanon cedars—with a carpet of misty blue forget-me-nots. He said he had just spread the carpet for us. Then miles of shorn yew hedges, six, ten, or twelve feet high at Hidcot Manor. Banks by the roadsides in places are thick with polypody ferns and primroses."

Ballycanew, Ireland. May 29. "Yesterday I spent some hours at a very beautiful country estate near here. Very well laid out grounds, big areas of well kept lawn with massive groups of rhododendrons in bloom and here and there huge shapely oaks with well defined browsing line. The whole thing, grand old house, greenhouses and several hundred acres, has been purchased by the government for a school of Horticulture. I'm here for a day or two with some cousins near my old home. Time is getting horribly short to fit in all the things I'd still like to do. But next Monday I take wing for Colorado and our own little new garden."



## AN ORGANIZED PLAN

By VELLA HOOD CONRAD

COLORADO Forestry and Horticulture is a non-profit, non-partisan organization. Our purpose is "To conserve and preserve the natural beauty;—to encourage proper planting and maintenance, and to make available the correct information regarding forestry, horticultural practices, and plants best suited to this climate; and to co-ordinate the knowledge and experience of foresters, horticulturists, and gardeners, for their mutual benefit."

At our recent conference Charles Drage of Colorado A. & M. outlined a Horticultural Program for Colorado that we can certainly benefit by. It is through co-operation that we can best serve and achieve our objectives. An organization is only as strong as its membership. WE NEED MEMBERSHIP. We also want to render service. Service, through personal contact with new members and present members. We have so much available at Horticulture House. I wish that each of you could, at some time during this year drop in and look over the wonderful Helen Fowler Library. I also wish that you would ask to see the work of the Herbarium group. We would like to know of your problems, and we welcome suggestions to make ours a stronger association.

For the remainder of this year we are instituting a plan for membership that consists of organized divisions—chairmen in the East, West, North and South divisions, with representatives from all the federated and non-federated Garden Clubs; representatives from the individual or specialized societies; and representation of local nurserymen, seedsmen, arborists, landscape architects, as well as our park superintendents, foresters, and

home gardeners. All of these represented in each division, who are working with us will give you a good chance for personal contact.

Colorado Forestry and Horticulture recognizes the need for Garden Clubs. We are encouraging more of them. Our purpose is to supplement and help. We know that *Rocky Mountain Horticulture is different*, and we want to help. We recognize and appreciate the work of the Men's Garden Clubs, and we enjoyed the many interesting things offered at our conference by one of their members—R. Milton Carleton—head of Garden Research for Vaughn Seed Co., Chicago, Illinois.

The work and fellowship among our friends in the Iris Society, Orchid Society, and the Rose Society are encouraging. We are grateful for the co-operation and help of our local nurseries and seed companies. They know and advocate a plan for planting and maintenance that is adaptable and correct for this area. Our arborists and tree men are experienced. We must have their help to maintain and conserve the health and beauty of our plantings.

Denver is justly proud of her parks. Our thanks to those who are responsible for planning, planting and maintaining all this. Much could be written on the work of the forestry department. Our president, Mr. Fred R. Johnson, is a retired forester. At times, it seems we take the magnificent grandeur of our Rocky Mountains so much for granted, that we overlook the needs of the plains. Again, we must strive for organization and co-operation. There is beauty on the plains, and even with the lack of sufficient rainfall there are plants that will grow and perform beautifully.



Next month we hope to have a list of all the representatives in each district. They will help and advise you. They are interested in Colorado Forestry and Horticulture and all that pertains to successful and correct gardening and conservation. Together, we can accomplish many things for all sections of our Rocky Mountain Area, and ours will be a truly "Colorful Colorado."

An easier way of girdling trees has been patented. If you want to kill a tree the slow way—meaning in a year's time—you can starve the roots by girdling. It prevents the prepared plant food, made in the leaves, from feeding the roots. In the meantime the raw materials are still able to reach the leaves (the "plant factory") because they travel through the wood of a tree, which is not damaged much by girdling. The result is a slow killing process, which may not show up until the next season after girdling.

Now you can accomplish the same thing by using a sodium-arsenite solution which is painted on the bark. The bark then loosens in from three to seven months. The Armstrong Forest Company holds the patents rights. It is particularly useful for pulpwood factories.

M. W. P.

### WILLOW TREES AND CHESTNUTS IN WASHINGTON PARK

Lovers of trees must not overlook the opportunity to see the beautiful coloring of wood in the willow trees around Grassmere Lake in Washington Park. This is the south lake. The lake in early spring has very little water, and on account of that loses some of its charm, but the willow trees and blue spruces, and many other varieties of trees at this time are extremely beautiful.

As you know, the colored wood of the trees and the blue of the needles of the blue spruces and other evergreens increase in intensity in early spring. The willows especially are very beautiful from the time when their buds begin to swell until the time when they open and catkins and new leaves are formed.

Nearby, along the road you must look for some tall shrubs which soon will bloom with big spikes of creamy yellow flowers. They belong to *Xanthoceras sorbifolia*. For many years we called them Chinese Chestnuts but now this has been shown to be erroneous and they are called Yellowhorn.

DeB.

*Xanthoceras sorbifolium*, Yellowhorn



## JUNE FLOWERS IN FEBRUARY

M. WALTER PESMAN

**D**O you want to surprise and fascinate your guests with a flower arrangement that is both novel and beautiful? Decorate your dinner table with a bouquet of June flowers in midwinter.

It can be done without too much difficulty. And the interesting angle is that some of the credit should go to these botanists, whom we are sometimes accusing of being without sentiment or aesthetic imagination. Pull your surprise out of the home freezer.



*M. Walter Pesman, Landscape Architect.*

A recent number of *Turtlox News* has an article by Professor H. D. Harrington of the Colorado A. and M. College. It is called "Preserving Flowers by Freezing." Recently I saw him produce a couple of dozen of the dainty Pasqueflower, that grows in the Rocky Mountains and blooms in early spring. They looked as fresh as if they had just been picked. But they were almost nine months old.

The process is simple. Flowers are

picked in the field, placed in ordinary two quart jars and the whole thing preserved in a home deep freeze or commercial frozen-food locker. They can be used at any time thereafter, remaining good for at least a couple of hours.

What a challenge to the ingenious hostess! Many a home freezer has empty space, at times, that can be utilized for beauty under this system! Can't you just visualize the freezer with colorful flower arrangements ready for use at short notice? And can't you hear the "Ohs" and "Ahs" from the guests as they are invited into the dining room in mid-winter and are greeted by a centerpiece of delphinium and lilies? The possibilities are unlimited.

Some experimentation is necessary. While, in general, yellow, blue and red colors are retained well, there may be mishaps that could well upset plans made many a month in advance. Again, some delicate parts might become wilted in too short a period, or discolored upon being frozen out. Certain plants with rather thick parts may be good for a whole day after being taken out of the freezer.

It must also be mentioned that there is no chance keeping the same flowers for two successive occasions. After all, you can't expect a plant to resume normal activity after having been exposed to freezing temperatures.

Another method that Professor Harrington has used successfully in preserving plants for botanical class use is fumigation with formaldehyde. Again, flowers are collected in the field and placed in glass jars with a layer of cotton saturated with formaldehyde. Glass top lids are securely

fastened to the jar and the flowers go in a coma without wilting, molding or turning brown. With this method he has kept flowers fresh for months and months.

Just how your guests would react to fumes of formaldehyde mixing with the savor of roast beef and Harvard beets—I would not know. But at least the two methods used in the botany laboratory have possibilities for clever adaptation by the hostess who is looking for some novel entertainment.

Perhaps in the future, we'll be able to buy our "bird's eye" flower arrangement together with our frozen meat and peas.

---

## CITY ZONING

By S. R. DEBOER

Zoning is the most effective civic beautifying.

In a measure we are all city builders. The chap who builds an aerial on top of his rented house or apartment contributes to the total which is the city. He adds less than the builder of a big factory but his imprint is there.

I don't mean to say that all of these efforts improve the city—many do the very opposite. Witness Denver's now famous whiskey bottle near the city hall. Usually we are not even conscious of the fact that we are doing more than building for our own needs. Naturally this has led to a confusion in the city building picture which is all but attractive.

Cities did little about this confused building in the past, but in recent years a sort of civic awakening has come over us. Nearly all cities are now trying to regulate this free-for-all building process. It is still a weak effort and basically not as far reaching as it should be, but it is a beginning. We call it zoning.

Since cities have taken to zoning there has been much less confusion in the building of the various districts. Many cities are beginning to show the effects of this work. On the outskirts of the city directly over the city line, building often goes on in a most undesirable way. Attractive, well-planned and zoned cities are entered through a mass of highway slums which is inexcusable. There is little encouragement for the city to make civic improvements if their effect is destroyed by activities outside of the city. Cities must control their entrances.

Denver was the first city in the State to be zoned, adopting its ordinance in 1926. Conditions change, and Denver's progressive administration is now getting ready to review its zoning and bring it up to date. After a quarter of a century this is high time.

Some other cities such as Boulder and Greeley have done the same thing, but many other cities still have to overhaul their ordinances, and some even have to adopt their first one.

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## FROM NATURE

### CONSERVATION NEWS

How will we contend in the bitter battle for wise land use, especially where the last remaining samples of certain habitats are threatened? If we enter these battles belligerently, fighting noise with noise, threats with threats, and mud with mud, we are helping to pollute the intellectual streams of American thought. On the other hand, if our actions take the form of fact-finding, clarifying, educating, awakening, and reconciling opposing views, then we can use the channels of public opinion to help us salvage some useful remnants of our torn natural resources, all across the continent.

## THE PLACE OF CHILDREN IN A HORTICULTURAL PROGRAM FOR COLORADO

Excerpts from Talk given by Charles Drage of Colorado A. & M. College

WE find that children are the easiest to work with; we find it difficult to cope with a lot of the older folks who resist change. To make our program work if we get all of the children interested, perhaps in several generations, we will be able to measure some rather startling advancements.

Children have a right to grow up in beautiful surroundings and in happy homes. Children have a right to have healthy bodies. Since children do not know what is good for them, you and I have the responsibility for caring for them until they learn—seeing that they learn health facts, skills, habits, and attitudes, which will make them better citizens.

Children demand the right to work, and obtain satisfaction from that work. That is, unless they have been given a faulty idea of the virtues of work. It is good to work, all of worthwhile things in life have been produced by work. Our greatest need is for more work, not less of it. Many children are not learning to work; they do not have the opportunity to work; some have been taught that work is for suckers.

As young people establish homes, we assume that they have learned skills which will provide for them the necessities of life (not necessarily living). Their attitudes may be warped, they may not possess all of the attributes of a good citizen. They have not learned how to plant a lawn or prune a shrub. Nearly every one eventually marries and nearly everyone has a desire to grow plants. The extent of their plant growing attempts

will depend upon their knowledge. The facilities will range from a single room or apartment where a single Saintpaulia or Philodendron will add a bit of beauty to the other extreme of large estates containing many landscaped gardens. The great majority, however, are the average with their homes on one or two small lots. The knowledge these folks will have is only as much as they have learned from their associates and from the books and experiences in schools. Their heartaches are many and their failures at plant culture contribute to a drab and demoralizing scene. We need more living in America and less demoralizing recreation. One of the ways we can obtain our objectives is to teach children how to grow plants, how to prune trees and shrubs, how to handle our soils and the effects of environment on plants. Our primary, elementary and secondary schools should teach more and more pertaining to plant culture. We must continue to encourage and work for more Junior Garden Clubs. Who is going to build our program? Everyone who can contribute. To list a few—the public and parochial schools, the newspaper and the radio, industry, city and county and state officials. Why are many of our school grounds bleak? There are several answers—no one is responsible for making them otherwise, or perhaps there are no funds, or perhaps school is just used during the summer, or some say children would destroy the shrubs if we planted them, anyway. These are all excuses and not reasons. Schools must shape the life and civic ideals of the



community. The school grounds can inspire a love of beauty and order in our children. Others who will help build the program are the luncheon and service clubs; these groups are extremely helpful in contests. Business, with their supplies to sell, and their prizes to award can be extremely helpful. Youth organizations with merit badges, awards and trips for horticultural achievement, garden clubs can be extremely helpful, for they will provide leadership and examples.

## DEAD TREES HARBOR PESTS

From TREE A-B-C's as presented by  
Swingle Tree Surgery Company  
in SHADE TREE DIGEST.

Diseases, insects, mechanical injuries, changes in the physical and mineral content of the soil and various other agencies are responsible for the deterioration and death of many fine shade trees each year. Regardless of the cause of decline, weakened trees and dead trees provide ideal living quarters for many species of injurious insect and disease pests. Strip away the thick, loosened bark of a tree that has died within the past year—you will be amazed at the number and variety of insects you'll be able to see on the inner surface of the bark and the wood of the tree. Add to these the insect eggs, spores and strands of fungi, which often are too small to be seen without the aid of a good lens, and it becomes evident that a dead tree is quite literally a "nest of pests." From this "nest" these pests spread out to attack other trees.

While spraying will continue to play a major role in the program of controlling diseases and insects that damage shade trees, the build-up of small infestations into outbreaks of

epidemic proportions often may be prevented by prompt exercise of sanitary measures. Every possible means should be used to bring weakened trees back into vigorous health; if, however, trees die despite such care, they should be removed before they can serve as a source of injury to their living neighbors.

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Mr. G. B. Gunlogson, who has a tract of 200 acres west of Cavalier, North Dakota, has offered it to the universities and other schools of that state as a nature sanctuary, to be used for educational and inspirational use. In explaining his purpose to the president of the University of North Dakota, Mr. Gunlogson says:

"To make his life on earth more worth while, the individual needs to be on good terms not only with his human neighbors, his automobile, radio, and good books, but also with the natural environment about him, the earth which nurtures him and the plants and animals which share it with him. If education is to contribute to this better life, it must come as well from deeper understanding and appreciation of the beauties and processes in living nature as from study of the humanities and the arts."

From *The Living Wilderness*,  
Winter 1951-52.

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## GARDEN STUDY GROUP

Old and new members who have not heard the paper on: "Annuals, Biennials, Perennials" are invited to come to the meeting at Horticulture House on the 4th Friday, May 23. Please phone DEXter 1249 if you plan to attend this meeting, as a member or a guest. Dessert-lunch at 12:30 P. M., 25c. For information and membership call: Mrs. J. P. Schoo, Teacher, 2650 Dexter Street, DEXter 1249.

## LET'S LIVE IN THE COUNTRY

By EDMUND WALLACE  
Landscape Architect

SO YOU'VE had enough of city life crowded in between your neighbors within arms reach on either side. The few flowers you've tried to nurse along in that two-by-four back yard just couldn't quite survive the onslaught of dogs and the patter of children's feet. You just know that if you had room for a vegetable garden, you could beat the rising cost of living. The more you think about it, and the more you figure, the more certain you are that you can't afford not to move out onto an acre in the country. You say, "country," because it sounds nice and because of the associations it has with the farmstead of your childhood with the well, the berry patch, the fenced-in vegetable garden, the spring house, the stile into the pasture, the nettles and the dusty path. Of course, you really mean a site with a mountain view, near a shopping center and good school, close to a bus for the cold mornings when the car won't start, where you can have city water, lights, and gas and, of course, irrigation rights. The livestock will take care of the garbage, but you'll want mail deliveries twice a day, and fire protection. The community which offers all this plus attractiveness, planned development, and the protection of zoning provides the ideal site.

You've talked yourself into it so you tour the countryside, (just over the city limits), and you find just the spot. Of course Ketchum and Soakum Realtors saw you coming and knew that this little acre of ground was just the thing the doctor ordered. The price was a little more than you had anticipated but you bought it anyway because, "didn't he say we could

have chicken every Sunday, have all the fresh eggs and vegetables we could eat, and tree-ripened fruit just bursting with vitamins? How could we miss? Can't you just see those large expanses of lawn with colorful flower borders attracting the birds and butterflies?"

Perhaps this country will sometime adopt a three-day work week, but if you still have to earn a living the hard way, you'll find that an acre of lawn panels and a few choice flowers well placed, provide a charming setting for any house with a lot less maintenance. Let a curving stone wall or shrubbery border separate these areas from a few select fruit trees or a hillside of native grass and plants.

Regardless of how cooped up you've been in the city, you'll feel amiss without a few cozy nooks where you can shut out the public or even members of your family occasionally.

This is what one Denver family is doing with a site beautifully situated on the east side of the Lakewood Country Club. Their three-quarters of an acre slopes gently to the edge of the well-kept fairway, commanding an unbroken panorama of the entire mountain range.

Numbered on the accompanying plan are some of the features that are being incorporated into the development of this country home.

1. Stone wall along street gives privacy to sunken garden which opens into orchard.

2. Orchard adds country setting—located on east side out of mountain view—frosty air moves to lower ground to west.

3. Planting screens living area from street.

4. Planting adds coziness—kept low to permit winter sun and allow view to Pike's Peak.

5. Grassy area to provide relief from warm pavement in summer.

6. Outdoor living room protected from northwest winter wind, gets winter sun and south summer breezes—paved for all-weather use.

7. Tall evergreens form cozy nook—provide windbreak for outdoor living room—invite birds—frame view to Mt. Evans.

8. Bright flowers atop serpentine wall add interest to lawn and show well from path below against backdrop of blue sky.

9. Stone retaining wall follows natural contour, serves as enclosure for barbecue room—built at seat height—has fireplaces built in.

10. Grape covered shelter commands panoramic mountain view—is secluded from house by hillside planting—ground paved for all-weather use and picnic table.

11. Gate leading into golf course lends feeling that garden continues on.

12. Path, steps and gate direct eye to view of peak over lake and red foot bridge.

13. Paths on hillside wind through native plantings of trees, shrubs and flowers.

14. Serpentine wall of dry-laid stone with pockets for rock plants separates trim lawn from native hillside.

15. Columbine, iris, ferns, and other native flowers in niches formed by serpentine wall.

16. Mountain indicator on pedestal or worked into pavement adds interest.

17. Evergreen windbreak also gives privacy to bedroom and terrace from neighbors to the north.

18. Shade trees strategically placed and trimmed high to protect view, keep out some of the hot, late after-

noon sun or summer—make interesting patches of sun and shade on terrace.

19. Tuberous begonias add color to a dark corner.

20. White wall reflects winter sun into service and play court—is made cool by vines in summer—clothesline quickly strung between hooks on wall and trellis when needed.

21. Interest of sunken garden and angle of hedges projects direction toward front gate from guest parking area. Hedging screens garden from street—yet provides opening for circulating breezes and view into orchard.

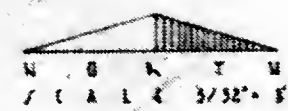
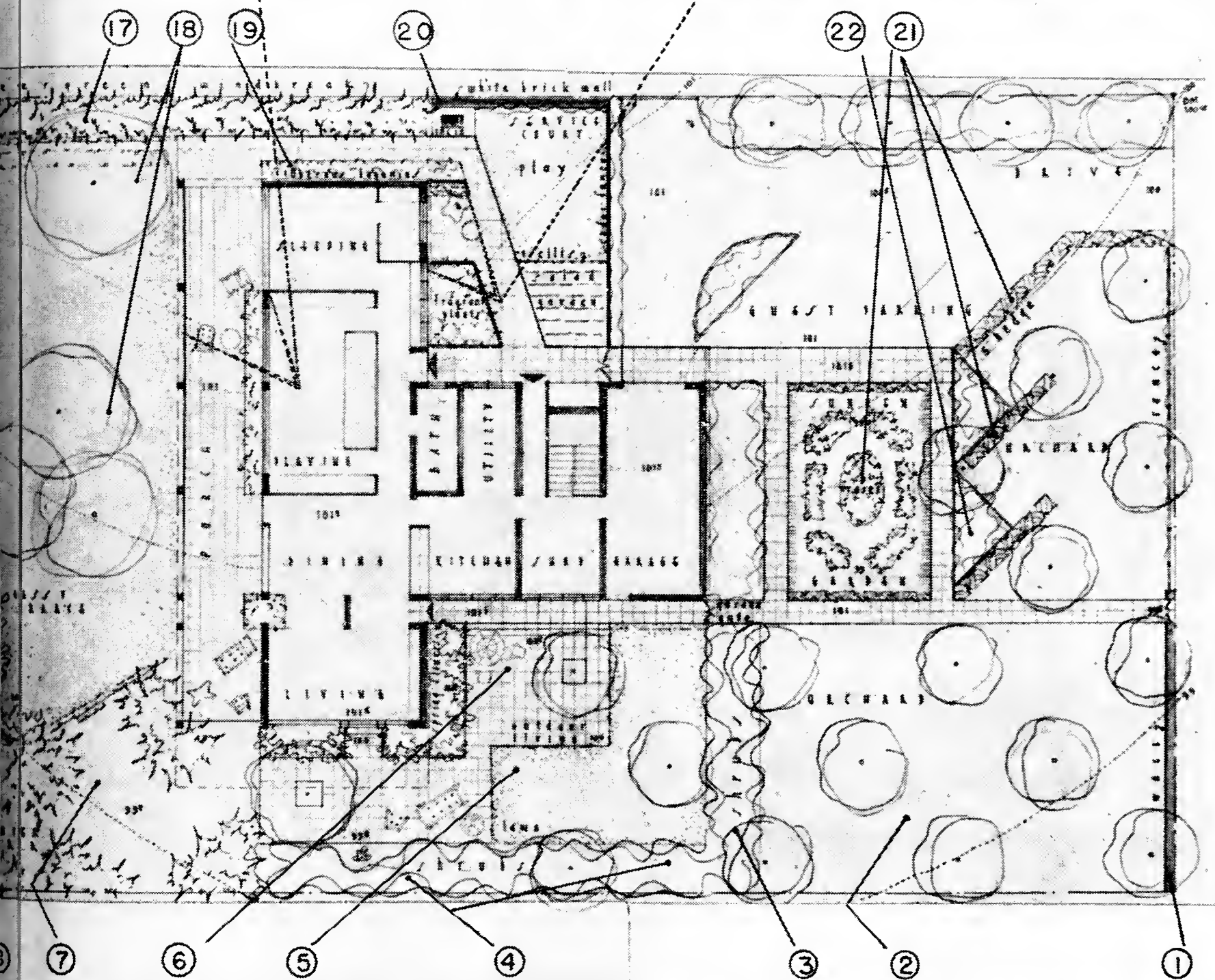
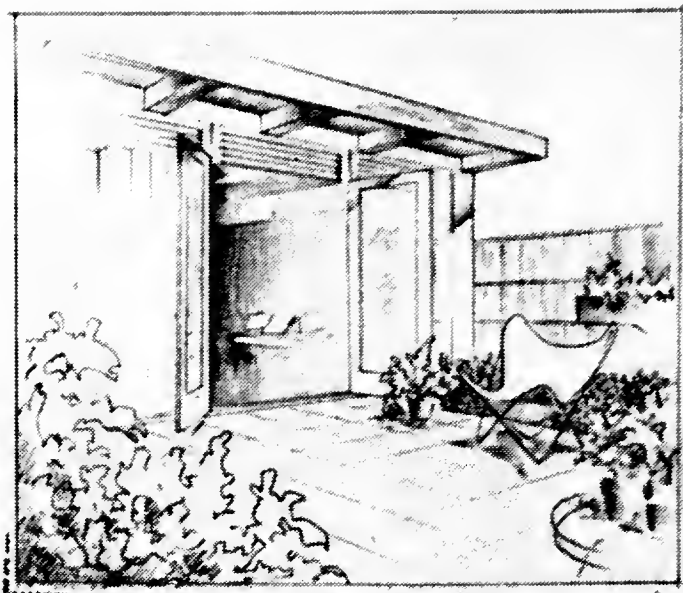
22. Triangular planting boxes with flowers for color and interest along walk—kept low for view into orchard.

The overall plan is an attempt to give orderliness and beauty to the house and its immediate surroundings. Sharp, clean lines, crisp slopes, and paved areas lend a modern touch. Lawn and planting areas are limited and defined by walks and stone edging for easy maintenance. The orchard on the east and the natural hillside on the west give an informal air to this country home. The landscape plan creates a picture garden and strolling area that is attractive in and out of season. When the trees lose their leaves they still hold their form and, with the walls, terraces, and connecting paths, maintain the design of the garden. Throughout the plan are many secluded nooks, each with a new interest inviting an exploration. Some are sunny, some shady, some are close-by, others shut away from the house. All are connected by paths and walks to make an excursion around the property an interesting one.

Thus, some of the sense of adventure that made the old farmstead an imaginative land are recreated within the confines of this three-quarter acre site. You can do it too!







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# MEETING THE FLOWER FAMILIES

## SCROPHULARIACEAE: Figwort Family

L. J. HOLLAND

THIS family of slightly less than two hundred genera and something over two thousand species has a horrible name, due to the fact that the ancients had the belief that certain members thereof would cure Scrofula. Rydberg evidently didn't like the name any better than I, so he called the family Rhinanthaceae, but since that translates as "Nose Flower", it was really no improvement. Here we might well say, "What's in a name", for the botanical name for the beautiful Snapdragon translates roughly as "Nose Flower", too.

Since this family is pretty generally distributed over the entire globe, it is not surprising that one finds tender greenhouse subjects as well as some of the hardiest of perennials. Two of the family, *Veronica* and *Digitalis*, are as well known for their medicinal properties as for their garden beauty. About forty genera are cultivated as garden subjects, but only the better known ones will be covered in this article.

**ANTIRRHINUM:** Snapdragon. Probably as well known as any member of the family, this charming plant lends itself readily to either greenhouse or garden culture. Although it is almost always treated as an annual, and is best handled in that manner, it is really a half-hardy perennial; in fact, I have a few plants on the South side of my house that have survived several winters with no added protection whatever.

There are about forty species, many native to North America, but most of the garden varieties are forms of *A. majus*, from the shores of the Mediterranean Sea. The new "Tetra" varieties are superior to the older sorts

in every way. They are reliably rust-proof, with larger flowers and more vivid colors.

*A. asarina* is a small trailing variety from Spain that is sometimes used in the rockery; flowers white, sometimes tinged red.

Seed may be started indoors or under glass in April and plants set out as soon as danger from frost is past, but earlier bloom may be had from seed sown in the open in August and the plants wintered over with protection.

**CALCEOLARIA:** Slipper-flower. While it is not normally within the scope of these articles to treat of house plants, this one is so beautiful that it merits mention; the pouch-like flowers, mostly red or yellow and heavily spotted, being evident in any floral shop.

Calceolarias do best in a rather rich soil and a northern exposure, an occasional feeding of liquid manure is beneficial. Their worst pest is whitefly (Aphids) easily controlled by nicotine sulfate.

**CASTILLEJA:** Indian Paint-brush. Here we have the State-flower of Wyoming, and it is well represented in Colorado, but since most species are root-parasitic they do not respond well to cultivation, so let us enjoy them in their native habitat.

**CHELONE:** Turtle-head. Not often met with in the garden, this plant prefers semi-shade and a moist location. A mulch of well rotted manure is beneficial. *C. glabra*, the only species grown to any extent, is sometimes confused with *Pentstemon*, to which it is closely related.

**COLLINSIA:** A group of hardy annuals, mostly from Western U.S. Closely related to *Pentstemon* and

Chelone, they have lipped flowers in shades of rose, violet, lilac, and blue. They do well in any good soil and will bloom from spring sown seeds.

*C. bicolor* has the greatest color range, but *C. verna* (Blue-eyed Mary) is very pretty, too.

**DIGITALIS:** Foxglove. This old fashioned flower is so well known that it needs little comment. While mostly biennial, they sometimes behave as short-lived perennials. Seed sown in spring or summer will produce flowering plants the next year. Thriving in any good soil, they have few pests or diseases; light shade is preferable.

*D. purpurea* is by far the most widely grown species and *var. gloxiniaeflora* is the most desirable of several varieties; Shirley Foxglove being a common name for this variety. *Var. campanulata*, (often listed as *var. monstrosa*.) has the upper flowers united into a large saucer-shaped bloom.

*D. thapsi* is a true perennial purple or pinkish flowers. Flower spike less dense than those of *D. purpurea*.

*D. laevigata* is another perennial 3 to 4 feet tall, has yellow flowers that are heavily spotted with purple.

**LINARIA** is the name of the Common Toadflax or Butter and Eggs (*L. vulgaris*) that is found throughout the Great Plains, from Colorado east to Illinois. *L. cymbalaria* is the familiar Kenilworth Ivy that is grown so much as a house-plant. It will thrive in a room that is too dark for most plants.

*L. maroccana*, an annual, is sometimes called Baby Snapdragon. This is a dainty little plant growing to about a foot high and having typical Snapdragon shaped flowers in the miniature. Crimson, blue, and white are the usual colors. Not a bit particular as to soil and of the simplest culture, it makes a nice edging plant.

The seed is fine and should be sown sparingly.

**MIMULUS** (Monkey Flower: Musk Plant) attains its greatest perfection in the West Coast region and only two or three species lend themselves readily to our arid climate. In their native state they are usually found along the banks of streams, so plan to grow them at the margin of a pool or in a part of the border that is kept fairly damp.

*M. ringens* is probably the most hardy of the group. Flower small, purplish.

*M. luteus* (Monkey Flower) has several varieties that give it the widest color range of any of the genus, but all have yellow throats with brown dots.

Both species are perennial, but are not too hardy, so must be protected.

**PENTSTEMON:** Beardtongue. This genus is quite well known in our state, for about one-third of the hundred and forty species are native here. Although they insist on full sun they flourish in almost any soil, of course, the better the soil the better the plant. All listed here are hardy perennials. Propagation is seed or division, preferably the former. Seeds of the species should be sown in the late fall and seeds of the hybrids are best planted in early spring.

*P. ambiguus*: Dainty low growing sort. Flowers white with pink throat.

*P. barbatus* and *P. torreyi* are quite similar, the former having a bearded lower lip. Flowers carmine to red; 3 to 4 feet tall. Prone to spread.

*P. Cobae*, about two feet tall, has large purple flowers.

*P. glaber*: Growing to about two feet, this one has brilliant blue flowers and is very showy, especially when grown in clumps of three or more.

*P. grandiflorus*: This is, I believe, the largest and most beautiful of our native pentstemons. Three to five feet tall, large sessile leaves very glau-

cous, blue to lilac flowers that are often two inches long. Truly a beauty.

*P. gloxinoides* is really a hybrid that is often listed as an annual pentstemon and is best treated as such. Large flower spike, with a wide range of color. Can be wintered in a cold-frame or with ample protection.

There are many other garden-worthy Pentstemons, this list is merely introductory.

**TORENIA:** Wishbone-flower. This plant should be better known, for it is very good for window-boxes or borders, in the manner one would use a Petunia, and is handled in quite the same way. Also nice as a pot plant. Will bloom in late June from seeds sown in April. Can be propagated by cuttings.

*T. founieri* var. *grandiflorus* is the only species common in the trade. Blue to purple flowers with a yellow throat. Appreciates light shade.

**VERONICA**, whose common name is Speedwell, does well in sun or light shade in ordinary garden loam. Propagation is by seed or division.

*V. spicata*, 1½ ft. has spikes of blue or pink flowers; var. *alba* is white.

*V. incana*, 1 ft. grayish foliage and deep blue flowers.

*V. repens* is a creeping sort that is good as a ground cover for bulbs.

*V. pedunculata* (Angel Eyes) 1 to 1½ ft. Flowers pale blue. Very good.

There are several other good species, but it is difficult to obtain either seeds or plants of most of them.

## LOOK AND LEARN GARDEN VISITS

By VAHNA BROMAN

**T**HE FIRST of four "Look and Learn" Garden visits, sponsored by Horticulture House, will be held on May 14, 1952, from 10 a.m. to 6 p.m. Tickets for all four tours may be purchased for \$2.50, or you may buy single tour tickets for 75 cents each.

We are purposely showing only five gardens on this first tour, because each is so outstanding that we would like all to have plenty of time to really see each one. An expert will be in every garden, so all your questions can be answered. Please feel free to ask questions whenever you would like information.

Tulips will be the center of attraction on this first visit, and the George Garrey home, at 1300 East Seventh Avenue, promises to be an exciting place to visit. The Garreys are old friends and supporters of Horticulture House, and their garden is always lovely. Last year the tulips

here were so numerous that often their heads were touching. This year they have put in 1,500 more tulip bulbs, so be prepared for something outstanding here. There is nothing more beautiful than tulips in May.

Mr. and Mrs. Frank McLister, at 445 Westwood Drive, are also friends of long standing of Horticulture House, and we can again expect the unusual here. Mrs. McLister is bothered a bit by arthritis, so they hit upon an unusual flower arrangement to solve the stooping problem. She has her flowers on raised beds so she can care for them with ease and comfort. This unusual flower arrangement adds charm to this lovely garden.

Beauty combined with utility on a small city lot will be seen at the home of Dr. and Mrs. Jan Schoo, at 2650 Dexter. Mrs. Schoo is, as she expresses it, Swiss born and Holland wed, and she has a rare knowledge and patience that she so willingly



shares with all. It is seldom that someone who has so recently come to the United States is so able and willing to share her scientific knowledge of soil preparation. Mrs. Schoo has much to teach us about making real compost, and she is more than happy for the opportunity to teach others what she has studied so hard to learn. Her lot is small, and her garden is necessarily limited, but the vegetables and fruit, as well as the flowers that grow here have won many, many ribbons in garden shows.

Have you ever seen a living-dining-garden room? It has taken imagination and considerable know-how to build the indoor garden at the Lewis G. Smith residence that will be included in this first garden tour. The Smith residence, at 2000 South Madison, is one of the outstanding homes in Denver. The possibilities of this home are limitless, and Mr. and Mrs. Smith have attained the unusual in their endless care and work in their indoor garden. In the Green Thumb of March, 1952, are two articles about this garden. You might like to glance at them before the visit so you will better know what to expect here.

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Have you wondered too what is behind that striking wall at East Sixth Avenue and York? So have I. The Donald Marshalls have transformed a strange looking lot into a veritable heaven of beauty here. Their home and garden were planned at the same time, and they have attained one of the most beautiful gardens in the city. Mr. Pesman has drawn a landscape plan for this home of Mr. and Mrs. Marshall, at 540 Circle Drive, and has also written a very descriptive article about the garden in the January, 1952, Green Thumb. We shall all be looking forward to seeing this outstanding garden behind that striking wall.

"Look and Learn" with Horticulture House this year, you will be better able to build for you and your family a more beautiful garden to add beauty to your home and to your city.

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## FOR KIDS OF 8 TO 80

### The First Wildflowers

**M**ANY Nature lovers get more thrill from finding the first few wildflowers than from wading among the thousands of beautiful flowers later in the season.

After all the plants being dormant over winter the first bright flowers give us promise of the new season to come. Sometimes when there happens to be a week of warm days in January, February or March there will be a few tiny flowers come into bloom on warm south slopes.

One of the first things to appear is also one of the last in fall, the Storksbill or *Alfillaria*, with its tiny purple flowers. The Pepper and Salt Parsley is often found very early. Its greenish, tiny flowers are not conspicuous but they are flowers and so are interesting.

Soon among the rocks will appear the clusters of small yellow flowers of the Oregon grape. Spring beauties may be seen under the Oak brush where they have had moisture but a little more sunshine.

It may be weeks then before any other flower appears or even more of these, but when the weather begins to be steadily warmer (is it ever so in Colorado springs?) then the great mass of flowers begin to show up, the bright blue delphinium, the white chickweed, the Sandworts and the great splurge of the Pasqueflowers and the little white candytuft.

It is fun to get out early in the season and see the flowers as they come.

*Erodium cicutarium, Storksbill, The first and the last bloom.*



## ANNUALS

Excerpts from Dr. R. Milton Carleton's  
talk at Rocky Mountain Horticultural  
Conference

We have all seen the so-called ranch house sprout from every conceivable area of vacant land. As unsuited as this type of architecture is to the Middle West, I am sure we will continue to see ranch houses built for years. From the standpoint of the bedding plant grower, the ranch house is a golden opportunity. Here is a house that just can't be landscaped by conventional methods. It goes contrary to everything most landscape architects were taught when they went to school. They learned all about foundation plantings to tie the house to the ground. But ranch houses have no foundations. They were taught how to use tall accepted material in the right spots to bring down the apparent height of building. But here's a house that's already so low that a healthy grasshopper can hop right over it.. \* \* \* Add to that the fact that it's an expensive house that has more than a 33 foot lot, and you are facing a situation where the conventional bush peddler is completely bewildered. These ranch houses can be landscaped only with bedding plants, and these plants can't be too tall.

\* \* \*

For the past three years I've been recommending to my friends that they sow Super Large Flowered Scotch Violas. Unless you insist on blotched flowers, Scotch violas will give you almost as wide a range of color, and far more flowers than pansies. For most of the growing season, the flowers will be larger. Don't confuse the Scotch types with the Jersey Gem Type, which is only about half as large. You could easily substitute these violas for pansies.

Petunias are the outstanding group

of annuals for bedding. In a way, this is too bad: the color range is so limited that it's hard to do much with them. In spite of the limited color range, however, they are about as fool-proof as bedding plants can be.

### LOOK AND LEARN GARDEN TOURS

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## TEA-CUP GARDENS BRIGHTEN OUR OFFICE

By KATHERINE CROCKER  
Edward Wolf & Associates

We've discovered in our office how to put perk-up in our tea-cups without a bit of tea. We have four "tea-cup gardens" brightening our window sills, two cups of healthy green vines and two cups of flowers. Progress with both the vines and flowers is rapid and we can almost see them growing. The first cup of vines, planted toward the middle of January, wound up two pencils we put in the cup for lack of better stakes. Now it is energetically sending shoots up the cords of our venetian blinds.

The flowers, planted March 1, will blossom in about two weeks. Each cup will grow about eight flowers, all varieties of color and species.

Equipment for the gardens was simple. We purchased four regular kitchen tea-cups and saucers harmonizing with the colors in our office. The rest of the materials came complete in "Garden Kits," which we sent for. In each kit there was enough special soil-less plant base for two cups, seeds for the flowers, seeds for the vines, and some wonderful "Quick-grow" plant food which keeps them healthy, green and growing.

They were easy to plant and easy to grow. All we do is water them occasionally and watch their daily progress.

Our gardens have made a cheerful addition to our office, and would be just as pleasant in a home. If you'd like to grow your own tea-cup gardens write us and we'll be glad to send particulars.

## WHY ROLL A LAWN?

"If anyone tries to sell you on the need for power-rolling your lawn, drive him off with a club."

That was the advice given to members of the Men's Garden Club in Chicago by Dr. R. Milton Carleton, research director of Vaughan's Seed Company in a recent talk.

"We have spent thousands of dollars trying to find a low-cost method of overcoming the effects of soil compaction, yet every year sees the use of more and more power rolling equipment," he continued.

He described experiments in which strips were rolled across established lawns, following the same path for a number of years. After two years the rolled strips could easily be picked out because of the yellow color and poorer growth of permanent grasses. Weeds like Spotted Spurge, "Farmers Lawn" and Chickweed were far more plentiful in rolled strips than in the open lawn.

The effect of compaction is to drive out air, force the soil particles so close together that moisture and plant food cannot penetrate, and to interfere in many ways with normal plant growth.

In the past lawns were rolled to press back plants heaved out by frost action, and to overcome the roughness of worm castings. Night crawlers, which work all winter long under snow, are a major cause of bumpy lawns in Spring.

If a roller is used for this purpose





it should not be heavy. No lawn can stand enough pressure to flatten out high spots and make the earth flow sideways to fill in low spots. A better method is to cut off high places with a spade and use the turf and earth removed to fill up low spots.

Top-dressing with screened compost or other forms of organic matter, and reseeding in the compost is the logical method to level a lawn. The sooner this is done in Spring, the better.

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## RHODODENDRONS FOR COLORADO

MRS. H. J. WAGNER

**C**AN Rhododendrons be grown in Colorado? Yes! There are a few "musts" that must be used to do so; but following a few simple rules they grow here very easily.

They are mostly natives of the mountainous regions of the east and west. Many hybrids have been developed from these. It is the state flower of Washington and West Virginia. Few exotic shrubs are more responsive to cultivation than rhododendrons, when properly cared for.

There are three essential rules that absolutely must be followed: Air circulation; wind protection and soil. The soil should be acid humus. Fill the hole around the plant with well rotted oak or pine needles, acid peat-moss and rotted manure. When the plant is well set in this apply pine needles, oak leaves or peatmoss around the base of the plant as a mulch to

conserve moisture as the roots should never become dry. This acid, loamy soil is absolutely necessary. Their roots are associated with a fungus partner (mycorrhiza). Lime in the soil is fatal.

The trunk should never be wrapped in burlap, but a burlap screen may be placed around it, leaving it open at the base for air circulation. In Colorado they should be planted in partial shade. If the plants should form clumps they should never be separated as it would be sure death.

I have a beautiful shrub planted on the north side of my house in my fern bed. About six feet out on the west and north I have shrubs of dogwood, ninebark, mountain maple and euonymus which serve as a wind-break. Whenever the weather goes down to about 32° the leaves roll backward in a tight roll against the midrib and turn a blackish-green in color. When the weather warms up to about 40° or higher they unfurl and turn back to the brilliant metallic green. This process continues almost daily throughout the winter.

The species I am growing is Rhododendron Catawbiense—a native of the mountain summits of Virginia and West Virginia to Georgia and Tennessee. I have had it five years, the past four years it has been covered with a mass of rosy-purple bloom in June. It has never formed any seed.

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*Rhododendrons blooming in Mrs. Wagner's garden.*




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To attain their maximum in growth and beauty your shade trees require an adequate supply of fifteen or more nutritive elements. Carbon, in the form of carbon dioxide, is obtained from the air; oxygen is secured from the atmosphere and from the water taken in by the roots; from this latter source hydrogen also is obtained. Locusts and a few similar species are able to take some nitrogen directly from the air. The other food elements, generally including nitrogen, are derived from the soil. These include nitrogen, phosphorus, potassium, iron, calcium, magnesium, sulfur, manganese, boron, copper, zinc, molybdenum, and possible sodium, silicon, aluminum and others.

Assuming that your trees have an abundance of sunlight, and that the soil is amply supplied with water and yet well-aerated, their next major need is an adequate available supply of raw materials in the soil. These you can furnish, if necessary; and, if you examine your trees closely enough, you will be able to tell whether or not the soil is lacking in the elements needed for vigorous growth.

Nutritional deficiencies in the soil cause a general decline in the health of the tree. The decline may be gradual over a period of years or, in some cases, it may be very rapid. The leaves become pale green instead of the normal dark green color associated with trees in vigorous health. The foliage may become rather sparse on the twigs. The current season's branch growth—the distance from the terminal bud back to the slightly raised or darkened wood collar around the branch that marks the end of growth of the previous year—should be measured and compared with the growth of former years. Gradual

shortening of the terminal growth of twigs and branches from year to year indicates undernourishment. Buds are likely to be poorly developed. Callus formation over pruning cuts or other wounds is less than normal. There is an over-abundance of dead or dying twigs and branches throughout the crown. Such are the symptoms of deficiencies in the soil.

The elements most likely to be lacking are nitrogen, phosphorus and potassium, because trees use larger quantities of these than of the others. In tree-feeding work, therefore, the fertilizer material used generally contains all three of these elements and, in addition, often some of the elements of lesser importance. The fertilizer material may be organic or inorganic; often, a combination of the two is used. The kind of material to be used, the amount, and the manner of application are matters best determined by the arborist in each individual case. His recommendations and decisions are based upon the species, age, condition and size of the tree involved, soil conditions, and other factors.

Spring feeding has certain advantages. The soil is usually moist, and the fertilizer material can more easily be brought in close contact with the roots. The nutrient elements contained in the fertilizer are available for the use at the time when the tree is making its greatest growth of the year. New wood growth induced by the fertilizer has ample time to develop and properly harden before the following winter.

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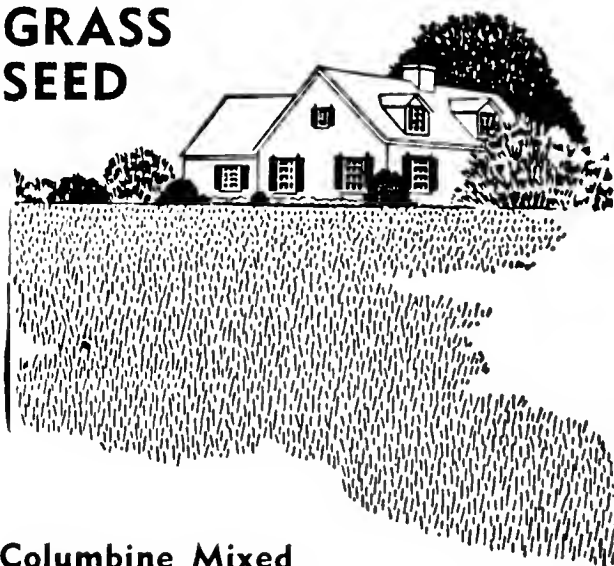
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## GARDENING GAY IN MERRY MAY

**M**AY should be the month to enjoy gardening—to appreciate to the full the miracle of new green life and get the full benefit from the association with the good brown earth. The rough work of transplanting and preparing soil should be over and the routine of water-weed-cultivate should not be started yet. Everything should be growing vigorously and the insects not yet beginning to do their annual damage.

The plans that have been developing in your head and on paper since the last growing season should now begin to develop on and in the ground. Spring, annually, should bring out the urge in us to do new and better things. Take time, before your nose gets down to the routine garden chores, to look around your neighbors' gardens and exchange plant experiences with them. Gardeners have no secrets but enjoy nothing better than passing on some little bit of a garden short-cut or trick to a new gardener.

With the thousands of new homes and need for the thousands of new gardeners, every old gardener should consider it their responsibility to help these kids get started right. Garden clubs of every kind, the more informal the better, will be in order. Learn where to go for correct information when there are questions that no one knows the answer to. Learn to discount, as may be necessary, the stories in the catalogs, the ads in the papers and the spiels of the door-to-door canvasser. Remember that Rocky Mountain Horticulture is different and that you should learn the plants which are most likely to grow under the varying conditions here and also learn the best ways to modify our climate to fit these plants.

Take Martin Keul's advice and make your garden for both beauty and utility. You need to ornament your home grounds, you need flowers to cut and you need fresh vegetables and small fruits. These can all be grown together.

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# The Green Thumb

Vol. 9

JUNE, 1952

No. 6

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*Pictures on both covers by Chas. J. Ott.*

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## Colorado Forestry and Horticulture Association

Organized in 1884

*"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."*

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 Editor.....George W. Kelly

## JUNE SCHEDULE

June 8—Climb of Devil's Head. Led by Sylvia Stephens. Leave H. H. at 8:00 a.m. Walking distance 4 miles.

June 15-16-17 — Returning 18th — Wheeler National Monument. Leave H. H. Sunday at 6 a.m. Led by Ruth Wheeler. Campfire Girls and Girl Scouts, others invited. Register by Wednesday, June 11th, at TA 3410 or PE 5565.

June 17—Evans School Auditorium, 11th and Acoma Sts., 8:00 p.m. Showing two new color sound films on the control of the Spruce bark beetle in the National Forests and rebuilding wornout ranges by seeding back to valuable grasses.

June 21-22 — Diamond Lake and Arapahoe Pass. Leader, Doris Weith. Leave H. H., 2:30 p.m., Saturday. Camp at Fourth of July Camp Ground. Good fishing in high lakes.

June 29—Loveland Pass Skyline. Led by Sue J. Kelly. Leave H. H., 8 a.m. Alpine flower trip.

July 3, 4, 5 and 6—Lost Lake in vicinity of original Estes Park Village. Leave H. H., 5 p.m., Thursday afternoon. Food and equipment packed in by horse. Riding horses available. Fishing and botanizing. Register by June 20th. Led by Marjorie Shepherd.

July 12 to July 17—Camp at Snowmass Lake. Led by Anna Timm.

July 18 to July 20—Move camp and climb Mt. Sopris. Camp on Crystal Creek. Pack in to Snowmass by horses. Riding horses for those who wish. Details at TA 3410 or PE 5565. Register by Wednesday 9th.

## PLANT AUCTION RESULTS

Mrs. Barbour and her Benefits committee decided this year that the plant auction should be in spring and the Antiques auction in fall, so Earl Sinnamon was selected to head the Plant Auction which was held at Horticulture House, April 19.

Some 60 firms and individuals donated material which was sold at auction by Col. John Swingle and his assistants. The attendance was good and materials brought reasonable prices so that a net profit was made of \$659.53. Twenty or more people donated their time to assist in various ways. Mrs. Johnston's Horizon Club girls helped as usual. There were many bargains offered and everyone felt that this was a good way to raise the money necessary to meet our expenses. We thank everyone who helped in any way.

We have often heard it said, "Let George do it." Well, George Kelly has done it this time. What has George done? See page 23.

Editors Pro Tem: Cook, Garrey, Pesman and Petersen.

## JUNE, THE MONTH OF BRIDES AND BUGS

**E**ACH year, shortly after the plants break out in new leaves and flowers, the insects and diseases also begin to develop. Weather that is favorable for plant growth is also favorable for insect growth, and often a severe storm or cold snap that damages new plants will do great good by helping to keep the insects under control.

Every good gardener should learn enough about the more common insects and diseases so that their attacks can be distinguished and means taken to check them before serious damage is done. We have interfered with the natural balance of Nature and so must continue to artificially control the damaging insects and encourage the beneficial ones. The first step in an understanding of control methods is to learn the principal classes of insects and the usual control, then check all plants frequently to catch the first signs of damage and take control measures before extensive damage can be done.

### Sucking Insects—Aphids

These soft bodied insects multiply very rapidly and attack almost every plant at some time. Every year we discover them in serious quantities on some tree, shrub or perennial that we considered as immune to attack. As they do not chew and are soft-bodied the control is a spray or dust of some contact poison. Nicotine sulphate (Blackleaf 40) is still the most popular remedy, with rotenone, pyrethrum and some of the newer chemicals also being used. Usually a soap spreader is necessary to effect complete coverage and a high temperature and absence of wind helps. As most of these usual remedies have no effect on the eggs, repeat sprays must usually be made in from a week to 10 days to completely eradicate an infestation.

### Scale Insects

These are, in effect, modified aphids. They move around but little in their lifetime and protect themselves with a hard scale over their bodies, remaining in one spot with their beaks inserted into the plant and living on the sap that they suck from it. Almost every American Elm in the state is affected to some degree, and most of them seriously, with the European Elm Scale. Oystershell scale is common on Dogwood, Lilacs, Cotoneaster and Ash trees. The cottony Maple scale attacks other trees than maple, the Cottonwood scale lives on any poplar (including the Aspen) and the Pine scale attacks spruce as well as pine.

All these scale insects are most effectively controlled by applications of oil or lime-sulphur while the plants are dormant, as a concentration of spray strong enough to penetrate and kill the insect would most likely also kill tender new growth. It is considered dangerous to use oil on evergreens, so lime-sulphur is usually used. These sprays must be carefully mixed, thoroughly applied and precautions taken to avoid damage to plants or property. Only a thoroughly experienced operator should be trusted with their application.

### Chewing Insects—Bugs and Worms

In general if an insect chews pieces out of the plants they can be controlled with a stomach poison like paris green or arsenate of lead or by the

newer insecticides with a residual effect like DDT, methoxichlor or Chlordane. These are all easier to control because they, and the damage that they do, are easily seen. It is seldom necessary to positively identify the species doing the damage for they all chew and so are controlled with a poison that they eat, or come in contact with while eating.

### **Ground Slugs**

These insects are more difficult to control because they hide out and do not stick around to be poisoned. Prepared pellets will kill some of them, chlordane will kill those that can be hit, but probably sanitation methods are the best control. Avoid frequent watering which keeps the surface damp, keep rubbish that they may hide in cleaned up and provide places where they will like to hide and that can be cleaned out daily.

### **Leaf Slugs**

These are small slimy insects which grow very rapidly from the tiny eggs laid on leaves. They skeletonize leaves of cherry, plum, hawthorn and other plants. As they are soft-bodied they may be killed with a contact poison, and as they chew they are controlled with a stomach poison, or, as they are slimy, they will be killed with any dust thrown on them. The important thing is to get to them quick, before they can do much damage.

### **Leaf Miners**

These are a more difficult class of insects to control as they operate between the upper and lower layers of the leaves. They are often very destructive to lilacs, alders and some other plants. One control has been Black-leaf 40 at double strength or one of residual chemicals like DDT or chlordane.

### **Ants and Grasshoppers**

It is no longer necessary to put up with their damage, though usually the ants' chief fault is that they harbor and protect aphids and so contribute to their delinquencies. Chlordane in powder or spray form will give effective control.

### **Mealy Bugs**

Usually found on house plants. Better throw away badly affected plants and remove occasional specimens with a toothpick dipped in alcohol.

### **Sow or Pill Bugs**

These small gray insects roll into perfect balls when disturbed. When plentiful they can do considerable damage. Controlled by a stomach poison mixed similar to grasshopper poison or applied on a cut potato. This poison must be distributed in cracks where the bugs can crawl but birds or animals can not reach it.

### **Snout Beetles and Thrips**

These insects have in the past been difficult to control but now several of the new, more powerful insecticides are reported to be very effective in control. Lindane is one of the most popular.

### **Borers**

Borers may be of many kinds, working in the heart wood of the tree or only in the soft cambium layer. Their damage has been great in American

Elm, Birch, Black Locust and other trees and shrubs. A preventative spray will often help and fertilizing affected trees will sometimes give the trees extra vigor to throw off attacks. Control of these insects is the work of an experienced operator with powerful equipment.

### Spider Mites

These are fast becoming the most destructive class of pest. (Entomologists do not call them insects.) As they suck but are not soft bodied they are not controlled with the ordinary treatments. There are several products now on the market which will kill them but are dangerous to handle. Sulphur is safe and has been used for a long time for control but is not always entirely effective. There are several new products which will probably be on the market soon which seem to control the mites with little danger to animals. They thrive in hot, dry weather.

### Snout Beetles or Curculio

Most common on roses or plums, they have been difficult to control with ordinary chemicals. Methoxychlor has recently been successfully used.

### Leafhoppers

Common on Ivy, Grape and Roses. As the young are soft-bodied, repeated sprays of a contact poison will get them, or a stomach poison, or one of the DDT type sprays will control the adults.

Every year new insects are found on new plants, and we are finding out more and more that "even the bugs act differently" here in our Rocky Mountain-plains area, so we must be continually looking for unusual damage and experimenting with unusual controls.

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## A PROGRAM

### "A HORTICULTURAL PROGRAM FOR COLORADO"

By Charles Drage, Colorado A. & M. College

"Now, what will the State Horticultural program be? Each organized horticultural group will have their own program for sure; they will also have the complete cooperation of all other organized horticultural groups mutually assisting and forwarding horticulture. I am suggesting a three-part program which can be forwarded by all groups. The three parts are: (1) Teach our children, (2) More horticultural institutes and meetings, and (3) More garden centers. I think that I have already discussed the need for teaching children. In regard to more horticultural institutes and meetings, I mean meetings in

communities not formerly reached with the type of information we have to offer. At these meetings, practical and experienced people teach and explain fundamentals in horticulture. To be successful, these meetings must be well attended, this means that all organized groups in the local community assist in sponsoring the meeting. Garden clubs should assume the active leadership; others on the committee could be representatives from the nurserymen, florists, dealers in garden supplies, etc. Perhaps it is not too much to ask that each town and city have a horticulture committee to pull together and direct the horticultural activities at the community level. This assumes then that meetings have been successful and interest has been created until people are ready to act."





*Photo by Bruce Korphage and C. J. Ott.*

**SCOTT WILMORE SAYS:**

"Why don't we in the Plains Area plant more Red Oaks? If you don't drown them they are perfectly hardy trees, and are they glorious in the Fall!!

## ANNUALS IN YOUR GARDEN

By WENDELL KELLER

**A**NNUALS have so many uses some thought should be given to their possibilities when planning most every flower bed. They may be used to give a quick show on new grounds, to cover bare spots when some perennials have failed, and to fill spaces left open after spring flowering bulbs have matured and lost their foliage. Another often overlooked good use of annuals is planting them between new shrub and evergreen arrangements so that permanent plants are not placed too close together for immediate effect of a more mature planting which then is crowded all too soon.

Another point in favor of annuals is their comparatively low cost. Often it is possible to raise more than enough plants from a ten or fifteen cent package of seeds. This low cost also makes it possible to have some extra gardening fun by trying out some unknowns every year. Not many gardeners know all the annuals. Most of us know the relatively few that are commonly grown, and from which it is wise to build the structure of a garden, but most gardens have at least a little space for one or two new or untried ones each year.

In the parks many entire beds are composed of annuals, but for home grounds, annuals alone are not recommended because they do not come into bloom until the growing season is well advanced. This period of blooming starts at a time when perennials have completed one bloom but before they have developed another.

Everyone knows that annuals make a great supply of flowers for cutting. To keep them blooming they should be cut because their one great aim is to make seed to insure the continuation of the species for another year.

In many instances if the old blossoms and immature seeds are not removed the plants will stop blooming and die or become unsightly long before a killing frost.

If you have a shady garden select carefully the annuals you plant and if the shade is dense annuals may not succeed at all. Because they must complete their life cycle in one growing season annuals require lots of sunshine.

The terms tender, half-hardy, and hardy are applied to annuals, but keep in mind these terms refer more to the seeds than to the plants themselves. Hardiness of the seeds is not a thing that can be foretold with perfect accuracy as many factors may determine whether or not a seed or plant is hardy in a given location. A seed may be hardy when planted in heavy soil but not when planted in sandy soil. Many are hardy when covered with snow over winter. This factor is one that keeps many annuals from being hardy in Colorado though they might be in more northern and eastern states.

Tender and half-hardy types should be started in seed pots or flats in a coldframe, hotbed or greenhouse as early as March. Hardy selections may be sown in the ground where they are to remain or may be transplanted provided they can stand transplanting. In annuals as with other plants such as trees and shrubs the plants with long, unbranched roots are the ones most difficult to transplant. If transplanting is not advisable be sure the planting is properly thinned. The operation of thinning should be done over a period of weeks rather than doing all the job at once. Small types may be eventually spaced not farther apart than three or four



inches while strong growers may need a foot of space or more.

Pick up your favorite seed catalog and study it. You will find a type for most any situation in your garden. You may select from vines to ground covers that will flourish if given just the environment your garden has to offer whether it be hot or dry, moist or sunny, in fertile or improverished soil. Although annuals are not shade loving plants some can do quite nicely in light shade, such as pansy, China-aster, petunia, cynoglossum, sweet alyssum and forget-me-not to name a few.

Have you tried: Annual dahlia. Many people prefer them to the bulbous type.

Lavatera. Hollyhock like blossoms on a very bushy plant of two and one-half feet in height. Comes in pink and white.

Penstemon. Plants that grow two feet or more in height and bear foxglove like flowers of white to deep crimson. Sensation is a good strain.

Heliotrope and dwarf marigold. The blue and yellow make a pleasing combination.

Nicotiana. For the sweet scent and night blooming. The night blooming habit is also a disadvantage as the plants look weedy and gone to seed in the daytime.

Pennisetum. Ornamental grass. Give it plenty of room for if it crowds other plants it can turn your garden into a weed patch.

Cleome. Can endure city conditions and partial shade. Odd blossoms that are interesting.

Four o'Clock. Maybe too old and common to mention but they too can endure city conditions and they can make a good annual hedge.

Verbena venosa. A good ground cover and the lavender-blue flowers are very attractive. This is a peren-

nial but handled as an annual in most instances.

Gourds. Annual vines of rapid growth. Children (and grown-ups, too) enjoy watching the fruits develop. Can be shaped by tying with string or enclosing in a mold while growing.



### MY GARDEN

Unless my palm may press the soil,  
Unless my hand may pull the weed,  
Unless my brow be damp with toil,  
The garden is not mine indeed.

—Chinese Proverb.

From THE CORNELL PLANTATIONS

### THE GARDEN STUDY GROUP

M. Walter Pesman, landscape architect, will talk on "This Year's Gardens and Next" using lantern slides of fine gardens here and abroad, at Horticulture House on the fourth Friday, June 27, meeting from 1 to 3 P.M., dessert luncheon at 12:30 P.M., 25c. For information and membership call Mrs. J. P. Schoo-Teucher, 2650 Dexter Street, DExter 1249. Guests welcome.

## WESTWARD—ON TO THE DINOSAUR

THE annual trek is on! We must visit the Dinosaur National Monument and the country adjacent at least once in the season, and so April 26, 27, 28, and 29, was that once! Six of us, all in George Kelly's hardy suburban, did some pioneering and tried to be the first into Pats' Hole and the Mantle Ranch but had to be content with the outskirts, for after all we were just five women and one man. What we did see, though, made us all the more anxious for some good roads which we all heartily agree should be provided by the government or Utah and Colorado. (We don't care which, just so there are some and those, kept under maintenance the year round.) Our first night was at the Monument campsite proper, under a big overhang right on the edge of the Green River where we had disembarked the year before from our boat trip down the Green. Water sang us to sleep and in the morning the most beautiful bird songs wakened us before daylight. The second night was spent on the mesa about two miles on the road to Blue Mountain, where we found such beautiful phlox growing high up in the rock formations; also, tiny brilliant paintbrush. The third night was spent at the Gateway to the Lodore, with its majestic sweep of river view, out toward the north and down into the canyon itself. A slightly damp camp that night but after a delicious breakfast, we were on the road back to—Horticulture House.

SUE JOHNSON

What were the impressions left by my first trip to Lodore Canyon? Rolling hills, topped with Utah junipers, bright in spring green and framed by the gray of sage—lovely spring flowers, growing in unexpected places—desert birds, singing sweetly, early

and late—towering canyon walls, turning to cut off long vistas—a forest atop the cliffs and far below, the river, scalloped with inaccessible meadows, safe for nesting birds. I can shut my eyes and see these things but what is beyond the bend of the river? Will it be there always or must I hurry to see it?

MARJORIE L. SHEPHERD

Consider the thrill which came to us, a small group of wilderness lovers camped at Split Mountain, when a pair of Canada geese flew into the canyon and lighted on the river opposite our camp. Two days later after driving many arid sagebrush covered miles where desert and lark sparrows and sage thrashers were singing, and even a sage chicken looked out from the brush, we came to the Gates of Lodore. Here the powerful Green River enters its towering canyon, and here again we heard the sound of wild geese calling. We ran excitedly to the river bank to watch them flying low over the water and swimming about undisturbed. Here they nest in the marshes above the canyon. We hope they may long come to this place for security and that we may long have the privilege of going there to see them.

RUTH ASHTON NELSON

It is possible to go by boat from Green River, Wyoming, to the bottom of the Grand Canyon if one is hardy enough to make the trip. I've decided it's not for me. The names sound formidable—Bachus Rapids, Hell's Half-Mile, Triplet Falls, Lower Disaster Falls and Whirlpool Canyon—all points along the route. I think it would be disastrous to flood this area, however, for there are many who do enjoy just such a trip, and





*The beautiful gateway to the Lodore Canyon in Dinosaur National Monument.*

would get no thrill at all from putting around a reservoir!

But there is something rather fascinating about camping on the river. The Green at the Gateway to the Lodore and the headquarters campground at the Dinosaur National Monument is wide and swift. It's a live, restless thing—lashing against the rocks. The sound was enough to waken one with its fierceness. But one had only to look up—the moonlight and stars were most reassuring.

SYLVIA STEPHENS

"What ailed thee thou sea that thou fledest,

Ye mountains that ye skipped like rams,

And ye little hills like lambs?

*Psalms 114.*

That is a very good question. It might have been queried from the rim overlooking Echo Canyon, or high on the narrow point on Harper's Corner looking into the vast tumble of restless uprisings.

Mountains, skipping like rams, romp down to the edge of mighty rivers that join forces at the base of majestic Steamboat Rock. Jointly, those streams slither down to the narrows and become a twisting, twirling river for a brief while, then flow into a wide and almost sluggish stream

again until they merge with the Colorado River. In the shelter of sheer rock walls and caves from Pat's Hole to Mantle Ranch our red-skinned brothers lived. They loved these protected canyons and mesas and carved and left the childish grotesque records of the history of a race long gone and almost forgotten. How did they reach that high up? Shifting sands, rare rain and snow storms have left these carvings intact. The waters behind a dam would not be so considerate—also the continuous in-flow of sand and silt would finish the job completely in eighty years (the scientific allotment of time of usefulness of the dam).

ANNA TIMM

### TIME FOR ACTION

Extracts from a Recent Bulletin from the National Parks Association

Senator Watkins of Utah has recently introduced S. 3013, to authorize the construction of the Upper Colorado River Storage Project. Included among the many dams and other works named is Echo Park dam, which would flood the canyon of the Green River in the Dinosaur National Monument.

Most conservation organizations are on record as strongly opposed to the authorization of Echo Park dam or any dam that would destroy the primary natural values of this national monument or any area within the national park system. It will be extremely helpful if vigorous protest is registered against the Echo Park feature of S. 3013 immediately.

Opponents of this dam should write Senator Joseph C. O'Mahoney, Chairman of the Senate Committee of Interior and Insular Affairs, United States Senate, Washington 25, D. C., expressing their view with regard to the Echo Park dam and the protection of Dinosaur National Monument,





and requesting to be notified when hearings are called on S. 3013 so that they may testify.

Secretary of the Interior Oscar L. Chapman has ordered a restudy of the Upper Colorado River Storage Project to determine the possibility of eliminating Echo Park dam and Split Mountain dam in favor of alternative plans that would utilize other feasi-

ble sites outside the boundaries of the monument. He has not yet reported the findings of this new investigation, but the indications are that feasible alternatives have been found.

**Write now and Protest this unnecessary damage to one of our country's great scenic attractions.**

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## BIG-DAM FOOLISHNESS

By ELMER T. PETERSON

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**A**S AN aftermath of last summer's disastrous Missouri Valley floods we are now in serious danger of being stampeded into a flood-control program which already has proved to be conspicuously unsound and tremendously wasteful of good farmland and public money. The country is now being "sold" a program that consists mainly of huge downstream dams, designed to protect only the narrow river zones below them, the banks and the flood plains of the large streams.

It is hard to pin down the exact cost of this limited-performance type of flood control, but certainly it would run into billions of dollars. However, the shocking thing about these big-dam plans is not only the huge costs involved—but that the big dams have tragic faults, as I will show. The truth is that we can build a much better program, a cheaper and more productive system, than the one offered by the big-dam enthusiasts. We can do it by making full use of little dams and modern soil and water conservation practices which stop or slow down the water where it falls. And instead of inundating rich lands behind huge dams, this agricultural type of flood control makes farmlands more productive.

A bitter fight now is shaping up between the big-dam and the little-dam advocates in virtually all of the Missouri Valley. On one side are the Army Engineers, driving hard to put across a costly big-dam program before the memory of last summer's terrible floods wears thin. Backing them are politicians with a keen scent of the pork barrel, a powerful tax-financed bureaucracy and some newspapers and business interests. Their plans draw support from hard-hit cities and towns which want protection as fast and complete as possible, regardless of the cost, which would be borne by the Federal Government—and thus by all of us.

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### LEARN TO IMPROVE YOUR GARDEN

By going to college out of doors and in the class room. M. Walter Pesman is repeating this summer course in landscaping for C. U. Extension, Wednesday evenings and Saturday afternoons from June 18 through July 19, \$10.00.

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*Rhododendrons* are being successfully grown in Wyoming according to the Bulletin of the Garden Club of America (May '51, p. 58).

## NEW PLANTS — NEW FUN!

By DR. MORAS SHUBERT

Botany Department, University of Denver

**E**VERY YEAR a good many "gardener-hours" are spent seeking answers to the question—"What new things shall we try this year?" One of the important pleasures of gardening is gained from success with new species and varieties. There is real adventure in such experimentation!

Unfortunately, too many people become discouraged by failure from improper understanding of the plants they are trying for the first time. All too frequently an exciting description of a flower or vegetable is seen in a catalogue printed for a region where the climate is far different from ours of the mountain states.

While some plants can adapt themselves to widely differing climates, and others may be grown where we artificially adjust the climate to the needs of the plant, there are certain limits.

Now how is the neighborhood

"Green-thumber" going to continue to amaze his less clever followers with his shrewd choice of new garden plants?

Systematic study is the answer.

Suppose the description of a species foreign to the locality is found. In order to decide whether or not it has a chance of survival, and what kind of culture to give it, certain facts must be determined. A search should be made through garden books, encyclopedias, and even dictionaries for data about it. Things most important to learn are these—Where does it grow natively? Does it naturally grow on low, moist ground or on well drained soil? Does it do better in the shade or in the full sunlight?—What horticultural improvements have been made upon the native species?—Where else has it been grown



*Trillium Growing in the Routt National Forest, a plant that isn't supposed to grow in Colorado, but here it is.*



in gardens?—Does it require acid or alkaline soil?

The answers to these questions can be found for almost any kind of plant in the Helen Fowler Library at Horticulture House.

Armed with answers to these questions, the gardener can make a better guess as to the likelihood of his own success with the species. For example, if a plant is known to require an acid soil, the chances of its growing on plains soils, normally alkaline, are small. On the other hand, a plant that originated in the grasslands of Argentina might be quite at home here.

Sometimes it is necessary to find both the common name and the Latin botanical name of a plant in order to trace printed information about it. Most all garden encyclopedias list horticultural plants under both headings, and the better dictionaries often provide such information. A very helpful set of books is the *Standard Cyclopedia of Horticulture*, by L. H. Bailey.

For a little practice with this method of choosing plants, try looking up these less commonly grown plants that might produce beautiful flowers in some sections of our mountain states: *Achimenes*, golden *Cleome*, *Cobaea*, *Tigridia*, and *Viola cornuta*.

Another source of new garden varieties, often overlooked, is to be found in our beautiful native plants. But these should not be dug up, or be otherwise destroyed where they are found growing. Rather, seed should be collected from them when it is ripe and planted immediately under a little leafmold in a suitable spot in the garden. Many of our native plants are so beautiful that their seed is advertised and sold by seed dealers. Colorado columbine seed and seed of some of our native penstemons and phloxes are examples of this kind.

So why not cooperate with nature and grow more of these natives that are truly adapted to our environment?

So if we find that flowering dogwood just won't do well here, we can have just as beautiful a show of early white flowers on shadbush, or *Amelanchier*, a native.

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## ANNUAL ROSE SHOW

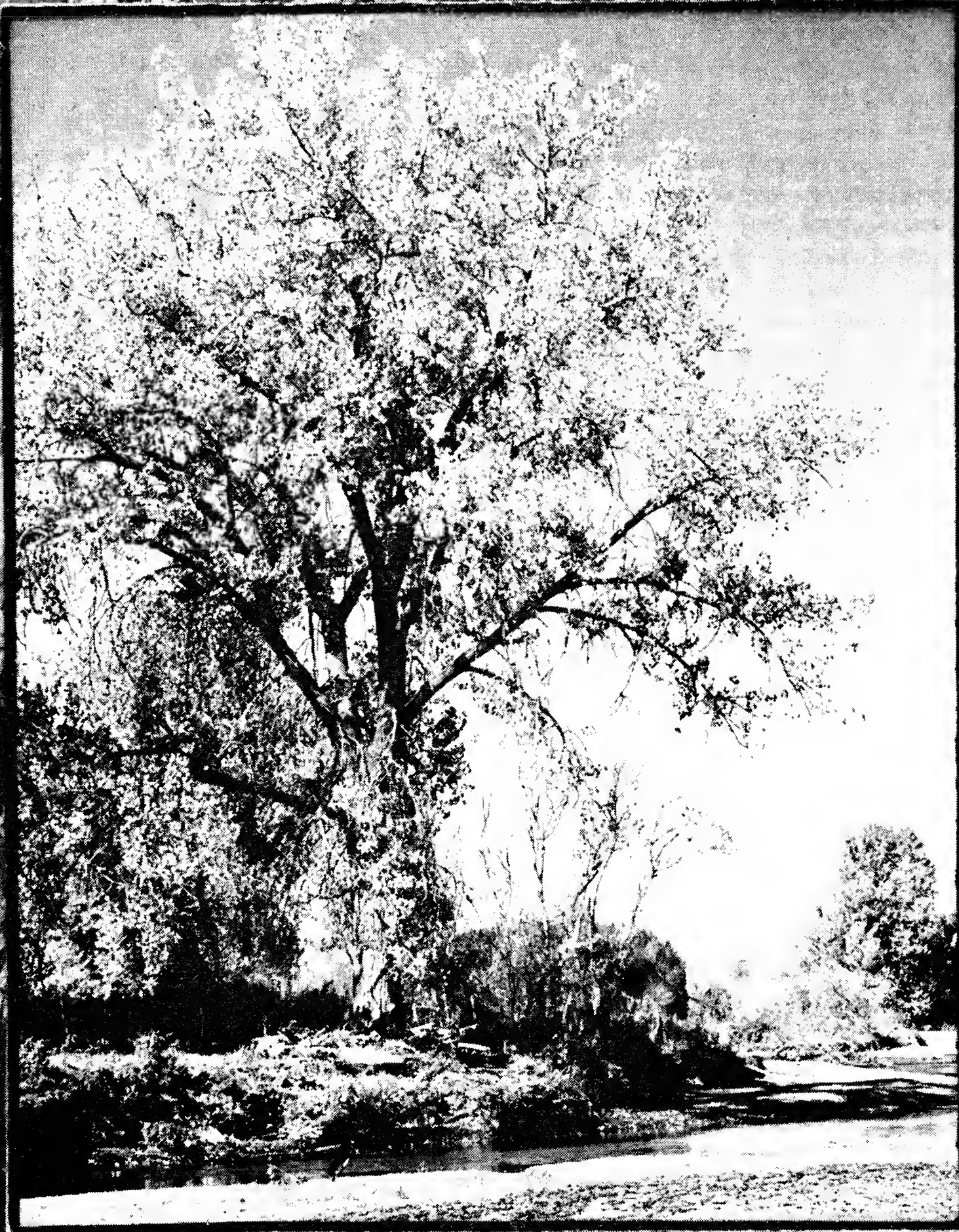
Plans are being completed by members of The Denver Rose Society to stage their first annual Rose Show of the season, June 22, 1952, at Kumpf Motor Company. This is one block south and one block east of Horticulture House. In September, we hope to have another show.

Many interesting features are being added this year. Local nurserymen and seed companies have donated six trophies. We are using the official entry blank and ribbons from the American Rose Society. There will be first, second and third prizes and honorable mention. Hybrid tea, Peace, will be the first competing classification. There will also be classification for best Floribunda, best arrangement and the three best hybrid teas.

We are also going to have a perpetual challenge. The winner must be the sweepstake winner three times to retain this trophy. With so many men interested in roses we are adding to our arrangements a division especially for men.

Denver Rose Society now has about 180 members. Anyone interested in growing roses is most cordially invited to join this society. Everyone is invited and welcome to attend the show. We are having one section of unnamed roses to be identified. This is for non-members and the public to participate in.

Don't forget the date. Sunday, June 22—Kumpf Motor Company. You are most welcome.



*Photo by Bruce Korphage and C. J. Ott.*

## OUR NATIVE COTTONWOODS

## THE COTTONWOODS

These are the trees that must be loved with patience;  
Their cluttered, sprawling limbs, confused and wild,  
Need years of understanding thru all seasons,  
As one must know and love a growing child.

These are ungainly trees whose windtorn branches  
Shed dingy leaves, grown dry thru summer's heat.  
No symmetry of pine or oak enhances  
The dusty green from crown to gnarled feet.

These are the winter trees, when early dawn  
Sees them etched sharply on a deep grey sky;  
No color here but Nature's soft composite  
Of white and black and grey, to rest the eye.

These are the trees that love the light of Heaven.  
Their ragged arms reach high in humble praise,  
Transfigured by the rosy glow of sunrise  
Or by the clinging of the sun's last rays.

This simple, rugged tree, this pioneer,  
Inside whose quiet depth the past now sleeps,  
With patience, over man and earth and beast,  
A constant vigil with the Master keeps.

MARGUERITE B. DEEM

**I**N a land where native forest trees are predominantly evergreen the cottonwood stands out as our most valuable deciduous tree. There are about 6 or 8 species of the *Populus* genus commonly found in the area. Of these the Plains Cottonwood is the best known, largest and most generally distributed. It furnishes the only shade, nesting places for birds and fuel in many places in the Plains country. It is perfectly at home on the plains or in the foothills, wherever there is a little seepage of water and a little fertile soil. It was one of the first trees brought into the newly settled towns and planted for shade and street trees. Many still persist and have become grand old trees. Of late it is losing favor as a city tree for it does become much out of scale on a small city lot and the cotton from the female trees is a nuisance.

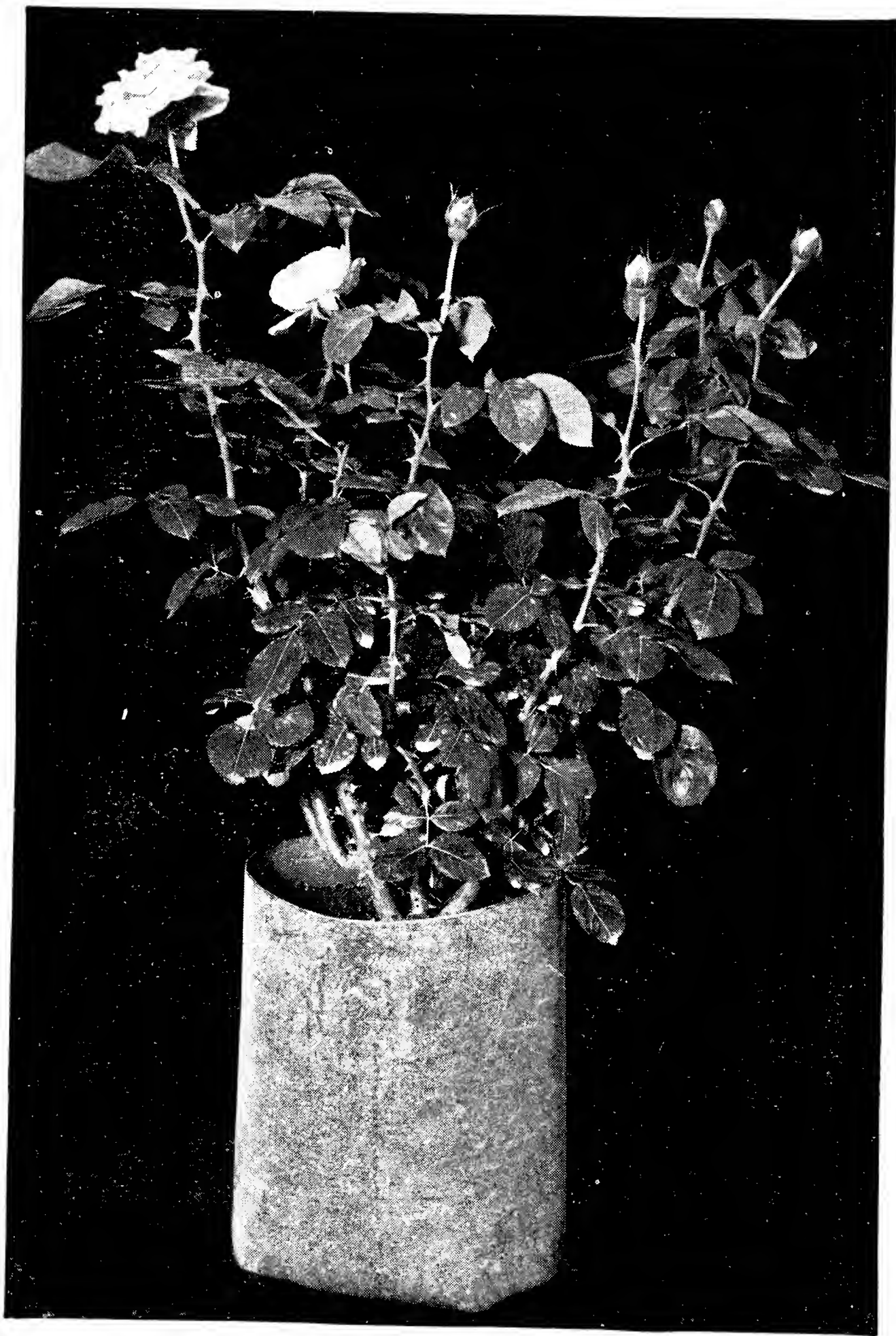
Planted in the country, in parks and wherever there is room it is a good tree, and much superior to the imported poplars.

As we get up into the mountains a little we will find the narrowleaf Cottonwood, which is generally a smaller tree, a little more vertical in habit and cleaner of limb. In many mountain towns it is the chief tree that can be grown for shade or ornament. Somewhat similar in habit and growth is the Lanceleaf or Wyoming Cottonwood.

The familiar Quaking Aspen is of course also a Poplar, and it contributes much of the beauty of the hills in fall as well as all season. Rarely are seen groves or specimens of the Balsam Poplar which is intermediate between the Aspen and Lanceleaf Cottonwood in character. It will grow in such difficult places as the gardens of Leadville.



# For more than a decade . . .

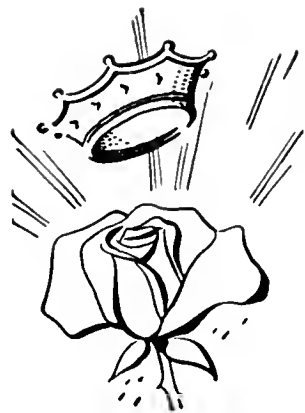


**Richards' incomparably better roses have set a standard of perfection never remotely approached by any others. Come and see for yourself.**



# *There is Nothing Like Them in This Region!*

(Several nationally-known rosarians who have dropped in on their coast-to-coast tours were kind enough to tell us there is nothing like them in the entire United States.)



Already planted and started for you, Richards' Roses are growing in large pots in specially-prepared soil, fertilized to insure rapid and permanent growth and bloom. We do not release plants until June 1. Our unique and exclusive methods of handling the plants prior to release builds a heavy additional mass of all-important feeder roots on the select 2-year Number 1 plants we start with, and we furnish about 160 pounds of the finest rose soil with each dozen roses purchased which entirely disposes of all question as to the adaptability of your garden soil to growing roses and insures your success the balance of the season.

*Planting in Your Garden Is Reduced to the Ultimate  
in Simplicity and Ease! You Can't Fail with  
Richards' Roses*

For 1952 we offer the largest list of varieties in the Rocky Mountain region. All three 1952 AARS, plus all AARS of prior years, plus scores of other fine HTs, Climbers, Polyanthas and Floribundas; 114 varieties in all.

*(For sale only at our gardens—cannot be shipped.)*

**Come See a Grand Rose Show (Best Between June 20 and July 5)**

*Northern Colorado's Garden Center*

**R I C H A R D S'**

*at the end of West Mountain Avenue*

**FORT COLLINS, COLORADO**

*In Richards' greenhouses and in Colorado's finest garden store: SO MUCH to make  
outdoor living and your gardening less work and more fun!*



## COLORADO NATIONAL FORESTS FROM A SPORTSMAN'S POINT OF VIEW

Extracts from "Conservation Panel" Discussion on April 18, 1952  
by Joe Penfold, Izaak Walton League

**B**Y vocation and avocation, I have but one interest—to try in some small way to help shape public opinion and achieve public understanding of man's fundamental relationship to his natural environment. That likewise, is the purpose and function of the Izaak Walton League which I represent.

Our Motto is "Defender of Soil, Woods, Waters and Wildlife." That is our self-imposed task. No one told us to do it, and we are not employed to do it. We are not subsidized by anyone. Our outfit organized, expanded and has grown in influence and prestige — nation-wide — because we know that resource conservation is the responsibility of every man, woman and child who inhabits this troubled world, and we're trying to do something about it.

We put wildlife last, in cataloguing our interests. While that may seem contrary to the popular conception of the League, it is no accident. We know that wildlife is a crop—in the

same sense corn, wheat, potatoes or sugar beets. We know that if we but manage our land, water and vegetative cover properly, we shall have abundant crops of corn, wheat, potatoes and wildlife. Our streams will run clear, and abundant fish for food and sport will be afforded.

\* \* \* It would be a serious mistake to consider the personal value of sports as summed up in the actual taking of a game animal or sport fish. The actual kill is the least important satisfaction of a hunting trip. The satisfaction of a fishing trip is not to be measured by the weight of the creel at day's end.

To be sure there are game hogs—to whom the take is everything. They are the losers. They fail to reap the full harvest that is available to everyone in the outdoors. There are those who would bitterly protest the wildlife "going to waste" in Mr. Canfield's preserve, Rocky Mountain National Park. But the more than a million people who visit the park each

year have lost little or nothing in real satisfaction — shucks, they've gained something pretty tangible, because they don't feel the pressure of having to kill a deer or elk to enjoy its presence in undisturbed environment.

In our increasingly complex and mechanized world — where day by day we live more vicariously and synthetically, we need the realities of the outdoors. A mountain storm, the thunder of lightning crash around some high peak isn't something we can purchase in a vacuum-sealed package. It's as real today as it was a thousand years ago. A down-right soaking, a chilling to the marrow is good for man's soul — the sweat of a hike to a high lake, the burden of pack sack, the blisters on our tenderized feet — is a good cauterizer of the super-man complex with which modern man seems afflicted.

These things are not for the hunter and fisherman alone. We can all enjoy them and do to the tune of additional millions who go into the outdoors without rifle or fishing pole, or maybe equipped with just a camera. In the process, we get close again to the realities of life — we can see again and be reminded that we are just a part of an ecological whole — not something apart from it.

If our soils, waters, forests and rangelands are well managed and in healthy condition we shall have wildlife. It is the inescapable duty of every sportsman worthy of the name to fight intelligently and articulately to preserve those basic resources. It is the inescapable duty of every other citizen to do likewise.

If we get that job done, if we do achieve the optimum of conservation on our lands and of our waters, we shall have an improved and stable agriculture, we shall have an abundance of clean water when and where we want it, we shall have sustained

production of timber and wood products — we shall have an abundance of outdoor recreation for all. And yes, as a mighty nice dividend, we shall have wildlife and fish, with the opportunity for reasonable harvests by the sportsman.

If we can get that job done worldwide, what will happen to the *isms* that feed on hunger, insecurity and incomplete living? They will surely shrivel on the bush and die. Maybe then peace might become a reality.

Maybe such goals seem far away and unattainable. But I submit — is any lesser goal worthy of man's high purpose? I, for one, will not be content to leave the world to my sons in worse shape than it was when I inherited it. I believe every last man on earth believes the same, deep down in his soul.

But the "moral imperative" must be translated into action. That's what should come from every such group as this in every such meeting as this. There's a tremendous job to do, for each of us.

George W. Kelly and Mrs. Sue Johnson were married Friday morning, May 16, at the residence of Mr. and Mrs. George H. Garrey in Denver. Best wishes to you both!

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## WHAT DO YOU KNOW ABOUT ROOTS?

EVERYONE knows a few plants by their bright and colorful flowers, gardeners know many of the common plants by their leaves, bark or stems, but only the nurseryman discovers that the roots of plants are as various in character and as interesting as these other, well known, above-ground parts.

"Why do plants have roots?" and "What function do they perform?" are natural questions. Plants are supposed to be more primitive things than the animals and the fact that they are anchored in one place is one characteristic that distinguishes them from animals who move around in search of food instead of having it brought to them.

In addition to anchoring plants to some suitable spot of soil the roots provide a plumbing system that can cover a wide area in search of water and the necessary minerals. This water with minute quantities of minerals and chemicals is circulated up the stem of plants and as it flows through the green part of the leaf that wonderful process of photosynthesis is enacted so that through the action of the sun on this green chlorophyll the plant is enabled to take the waste carbon dioxide from the air to be combined with water and the materials from the soil and form the life-giving starches and sugars on which all plant and animal life de-

pends. This "digested" food is then circulated to all parts of the plant, including the roots, enabling the plant to make growth through the addition of additional plant cells. The way that the microscopic root-hairs reach out and absorb food and water is a miracle in itself. When this process is partially understood it can then be seen why all plants are called "soup-eaters."

Roots vary in size, habit and color with every plant. Some plants like the Plums, Russianolive and Roses range out long horizontal distances from the plant, others like the Black Walnut, Buckeye and Kentucky Coffee tree head for China immediately and may go down to great depths, while plants commonly growing in rich moist soil, like the Azaleas, Viburnums and Euonymus have dense masses of fine roots close up.

Buckthorns have jet black roots, Euonymus have white, Sand cherries have bright red, Barberries yellow and many other plants various shades of dull browns. Some roots are very tough like the Siberian Peashrub while others may be brittle like a Peony.

For gardeners in the Rocky Mountain-Plains area the most interesting thing about roots is the story that they tell about our natural climate and the evidence that they give that "Rocky Mountain Horticulture is Different." One of the pictures here reproduced show the root system of the Bush Morningglory that is a native on the plains around Denver. These roots may be as large as a man's body and go down 4 feet or more. They may support their tops for as long as two years with one good rain. It is reported that the original Indians ate them in starvation times. (It would have to be starvation times

*The extensive root system of the yucca.*





for they taste much like the end of a well frayed rope.)

The common Soapweeds or Yucca have roots which are quite fleshy and store much water as well as containing materials which allow them to be used for soap when pounded up in water. Every plant naturally growing on the area where we now build houses and plant imported ornamental plants from more moist climates, has some special provision to allow it to support the above ground parts with the limited rainfall which can be expected. Some are fleshy as those illustrated, others go long distances down to subsoil moisture and others may lie dormant long periods with little damage between rains.

Learning about roots gives the "why" to many of the practices found necessary to maintain good gardens in this area.

*Many of the Native Bushmoringlory have roots as large as a man's body.*



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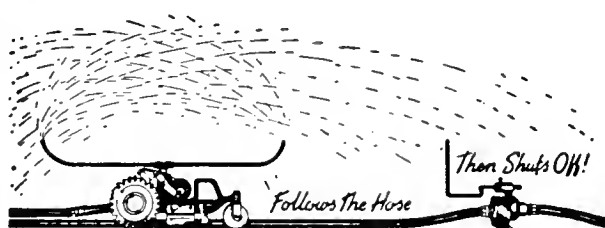
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## LOOK AND LEARN GARDEN VISITS

By VAHNA BROMAN

THE second of the Look and Learn Garden Visits planned for your pleasure will cover many different kinds of gardens in many different locations. Roses will predominate, but you will be able to enjoy many June flowers from the lovely large gardens like the one at the Marcus Bogue, Jr., home, to the tiny garden at the Woods' home.

As you stop at the home of Mr. and Mrs. Marcus Bogue, Jr., at 29 Crestmore Drive, your first thrill will come when you see the beautiful roses that line the front walk. There are many more roses in the back, but a yard so wonderfully spacious as theirs will be alive with color from many different June flowers. Mrs. Bogue does her own gardening, and it is planted the way they like it for the enjoyment of their family. If you have a large garden space, this will especially interest you because the Bagues have extended their garden the whole block to the back, having no alley to stop it. From the patio at the back I am sure that this family spends many hours of happiness just looking at the sloping garden that is theirs to work on and to enjoy.

Mr. and Mrs. W. F. Clendenen, Jr., have a comparatively new home at 711 S. Jackson. Already they have developed a garden of which they can be proud. Many different kinds of roses here, as well as a variety of June flowers, will make you want to linger and look a long time. I am sure that you will also be interested in the greenhouse at the back of the house. Would you like to grow orchids? Perhaps the Clendenens can help you learn the secret of growing them, because this interesting greenhouse shelters many of these delicate flowers. It is the lovely homes and

gardens like this one that are responsible for much of the beauty of Denver.

Perhaps you live at the edge of town, or in an older place that needs a touch to brighten it up. The Henry Conrad home, at 4741 Pierce St., in Wheatridge, must be just what you are looking for to help you plan that color as well as make your place a satisfying place in which to live. My first impression was the peacefulness of the flowers in among those lovely big trees. The covered well with the wooden plaque hanging from it is a most inviting spot. You will also enjoy the picnic spot at the back where a redwood wall is being built to shelter it from the hot afternoon sun. You will want to just sit and look at this lovely garden, and you can find a number of places to do just that. The roses here are outstanding. Nothing goes into this garden which has not been first tried out in a plot of ground set aside for that purpose only. In the September, 1951 issue of the Green Thumb is an article on this garden, with pictures. Perhaps you will want to look at it again before coming out to see it at its best.

Next door to the Conrads is another interesting home. Perhaps you should have seen it six years ago when Mr. and Mrs. M. V. Evans first moved into it. I am sure that the former owners of this home at 4733 Pierce Street would have trouble recognizing it now. Mr. and Mrs. Evans plan to do a great deal more here, but it takes many hours of work when Mr. Evans is doing it all himself. They are carrying out a plan that includes a great deal of redwood, and have already achieved much of beauty. Some of you must have an old run down place that is just begging to be fixed up, and you would

like to have some ideas. Well, here is the place to get them. I am sure that you will leave this little garden with a great deal of inspiration and you will wish that there were more home owners who took such pride in the beauty of their homes.

Mrs. Sara Flynn's home at 2338 Leyden is nestled in a whole neighborhood of beautiful gardens. You won't want to leave this garden once you have come. You will linger long beside the beautiful rock garden. The roses here are an inspiration. June, in all its splendor has painted pictures here that all will enjoy and take home with them in their memories.

Do you like roses? So do I. When I saw the garden at the home of Mr. and Mrs. Robert Stovall, 160 Race, I thought of the song I have enjoyed for so many years. It is called "Come To My Garden of Roses," for their back yard is truly a garden of roses. I have a feeling that these roses here in this garden must be wanting to say "thank you" to the Stovall's for their careful attention that they have given them. Cemented bricks have been carefully placed around every rose bed, as well as around every other flower bed, so that no grass or weeds can creep in and use the nourishment meant for the flowers. You will want to just sit on the back porch and enjoy this garden, as I am sure the Stovalls do, and say a word of thanks for the beauty of things.

Your yard is too small for a garden, you say? You will change your mind, I'm sure, when you see the tiny garden at the home of Mrs. L. V. Woods and Miss Ruth Woods. They have done so much with so little space. There's the garden in front, sheltered by a white picket fence that rests on a little stone wall. At the side of the garage lies a miniature rock garden carefully planned for maximum enjoyment. A cozy lit-

tle outdoor living room at the back of the house says "Welcome, will you sit down and have a cup of tea with me here." The fireplace and the sundial here in this bit of a garden help to make it as pretty a spot as you can find any where in Denver. You will discover that no matter how large or how small your garden is, you too may have one of which all can be proud.

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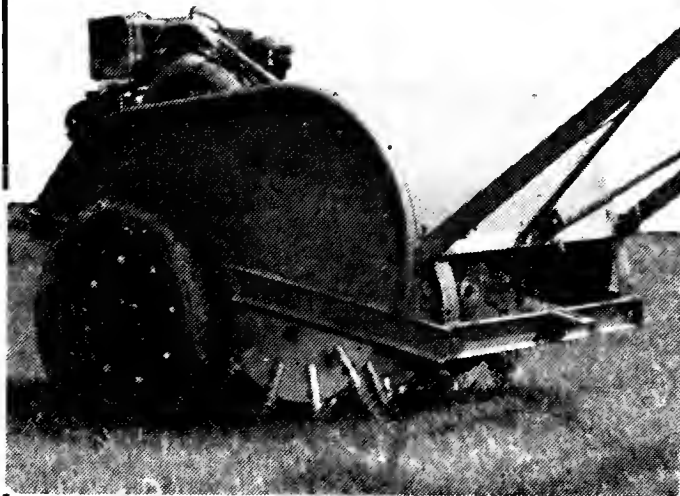
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SOME of the nicest of the wild-flowers should never be picked. They evidently do not multiply readily and can easily be eliminated from the wilds if not cared for. Many other flowers are so common and easily seeded that it would be almost impossible to completely destroy them.

A good rule is to never pick a wild flower unless there are hundreds in sight, and never pick a bouquet unless there are thousands.

The Wood lily and Mariposa lily are never too plentiful and should be protected. Most of the orchids are rare and should never be picked. Some of the gentians are becoming scarce. The tulip gentian of swampy places on the plains is especially rare. The Colorado Columbine is plentiful yet in some very wild places but is

becoming hard to see along our highways.

Beautiful, dwarf, alpine plants as the Forget-me-not, are becoming scarce on mountain tops frequented by tourists. Many of the other choice alpine plants are becoming hard to find because of unnecessary picking.

Even flowers which are rather common such as penstemons, gaillardia and paintbrush may be destroyed by wasteful picking.

Some of these nice native things may be grown in our gardens but the time to collect them is NOT when they are in bloom. A better method is to mark some plants with a label and come back when they are in seed and gather some of the seed. Good plants may be grown that will transplant easily. Natives which naturally





grow in very moist, very shady or well drained places can seldom be successfully grown in ordinary dry, sunny gardens. The natives that do the best under cultivation are usually those that naturally grow in a meadow-like environment. Even then, some plants have nice roots to transplant and others have tap roots heading for China which makes them very difficult to move.

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## WILDERNESS EXPEDITIONS BEING ORGANIZED

*Trail Riders of the Wilderness Launch Fourteen Pack Trips  
Into Primitive Areas of Eight States*

**F**OURTEEN expeditions into the wilderness areas of the West will be conducted this summer by the American Forestry Association. Organized under the name, "Trail Riders of the Wilderness," adventurers from all over the United States will meet at rallying points in Montana, Idaho, Utah, Colorado, Washington, California, and New Mexico to pack out on horseback into little-known but vast expanses of wild, roadless country. Two parties of Trail Riders will take to canoes, in July, and paddle their way through the chain of lakes in the wild Quetico-Superior country of northern Minnesota.

The Trail Riders of the Wilderness is a non-profit organization, directed by the American Forestry Association, Washington, D. C., as one of its educational activities. Costs of the trips (ranging from \$175 to \$215 per person) are shared by the riders, and all arrangements for packing and guide service are made by the association. On the trail the parties are joined by forest and park rangers who assist in trail breaking and are available to answer the many questions which arise concerning the history

and lore of the wilderness. The association also provides a medical officer for each expedition.

Trail Rider trips this year will vary from 10 to 13 days in length. Any man or woman in good health and with a reasonable amount of riding experience, capable of adapting himself to living under wilderness conditions and at high altitudes is eligible to ride. For the most part the Trail Riders prefer to sleep under the stars, but tentage is provided for those who prefer it. All food and other necessary provisions and equipment are packed in by horse. Generally the Trail Riders cover from 10 to 18 miles a day, with several days of rest during an expedition at spots where fishing, hiking or just plain resting are most enjoyable.

The Maroon Bells-Snowmass Wilderness of the White River and Gunnison national forest in Colorado offers two high altitude expeditions—July 31 to August 9 and August 13 to August 22. Parties will assemble at Glenwood Springs. The high Colorado Rockies have long been favorite sites for Trail Rider expeditions—excellent fishing and mountain climbing opportunities being available.

Trail Riders are again invited to explore the little known country in the heart of the mountainous San Juan National Forest in Colorado on the dates of August 6 to August 15. The party will meet in Durango to ride in this dramatic and colorful region.




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## ROSE NOTES

For the most color per square foot over the longest season, no other flower excels floribunda roses. Hardy, dependable, colorful—beautiful for mass planting—try them for bright edgings, for entrance walks or as hedges in one color where you want effect.

The soft coral tones of the Fashion are outstanding when planted with the new sand color in the brick homes. Try Chatter with white petunias. Spreading evergreens are a natural as a background for floribundas.

Floribundas tend to branch, so are bushier than hybrid teas. Cutting for bouquets will solve this problem. These roses require the same rules for feeding and watering as hybrid teas.

June is Rose month. The Denver Rose Society is having their annual show June 22, 1952. Kumpf Motor Company has again extended their hospitality to us and our show will

*Wild rose photo by R. J. Niedrach.*



be held there. Everyone is welcome and invited to attend.

We are in the maintenance portion of rose growing now. The care you give your roses the next two months will determine whether you have mediocre or gorgeous roses to display. The "Queen of Flowers"—treat your roses royally.

VELLA HOOD CONRAD.

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## ALASKA

Excerpt from letter from Charles J. Ott,  
Anchorage, Alaska

April 16, 1952—"Here winter is still pretty well set yet. We have had quite a few good warm days, and the snow has been going fast. However, it is snowing now, again—it will probably change to rain. The plant life is still slumbering peacefully; I have as yet seen no signs of awakening. Last Sunday, a friend and myself went on a snowshoe hike into the immense Portage Glacier country, about 50 miles southeast of here. Several flocks of geese and sandhill cranes flew over singing and telling of the warmth and beauty soon to come. The willow flats were full of moose—we counted 33 in one place. Got reasonably close to some as they could not navigate very well in the deep snow. In the crags, we spotted mountain sheep and goats, and out on the ice of the Turnagain Arm, a big lobo wolf. A few hair seals were playing about in the open water. It was snowing heavy most of the day but it cleared up in the afternoon—it was a beautiful day."

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## THE GREEN THUMB STORY

By JEAN FIEDLER

Published by Holliday House, New York

An interesting little story for children, telling how little Peter discovered what it meant to have a "green thumb." It is illustrated in such a manner that children understand and could very well learn how it's done. Peter learned who does and who does not have a "green thumb" and also the difference between the growing of the plants he seeded and the weeds which volunteer. It would be a good way to teach any child what fun it is to garden.

## *Pelargonium, Geranium*

By ROSE TUGGLE

Geraniums are the easiest of all house plants to raise, but they cannot stand artificial heat. A sunny porch where the temperature does

not go below forty degrees is best for them.

Plant them in good garden soil which is on the heavy side, in small pots to keep them root-bound. Do not water them too much, once a week is enough.

When the leaves turn yellow or the plants grow tall and straggly, it means that they are getting too much water, or the room in which they are being grown is too warm or both. Cool, dry, and plenty of sunshine are the requirements, and you will be rewarded with loads of bloom from February on.

Slips or cuttings taken from plants during the summer and kept growing should begin to bloom by November. Old plants that are taken up and potted must have a rest in a cool place and just enough water to keep them alive. By February they will begin to bud. Of course, when the plants are taken up they must be cut back.

In the spring old plants can be plunged into the ground, pots and all, which will make it easier to take them up in the fall.

Soil for geraniums should not be too rich, or the result will be a good crop of leaves and no flowers.



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# THERE WERE GIANTS IN THE EARTH IN THOSE DAYS

By KATHLEEN MARRIAGE

WITH the recent death of Dr. Aven Nelson there goes an epoch in the academic life of the U. S.

With his vigor, inspiration, integrity and his infinite capacity for work he turned out a long and varied list of publications from bulletins of advice as secretary of the Wyoming State Board of Horticulture to his revision and amplification of Coulter's Botany of the Central Rocky Mountains, a long and intensive piece of work, still the most detailed comprehensive published authority on plants of this region.

When we met him after his supposed retirement from active teaching he had still more drive, eagerness and interest in his work as Curator of the Rocky Mountain Herbarium than many men half his age.

His early botanical expeditions make a thrilling saga of the pioneer west. When he wanted to collect and classify many new plants, lack of funds didn't deter him; he asked and got from the Union Pacific Railroad free transportation for himself, his horses, covered wagon, his student helpers, his family, a summer's provender for them all and set out for Yellowstone National Park. From this expedition a rich harvest of meticulously prepared plant specimens including many new species was shared with the great herbaria of the world: Washington, London, Berlin, Geneva, even Calcutta. This collection was the basis of the now famous Rocky Mountain Herbarium at the University of Wyoming at Laramie.

Dr. Nelson possessed a long string of academic degrees, was president of the Botanical Society of America, 1935, and was its delegate to the

International Botanical Congress in Amsterdam.

He came to the University of Wyoming in 1887 as a member of the first faculty, was Professor of Botany and during the first world war President of the University. He resigned from the presidency to return to his beloved Botany and was made President Emeritus.

Probably his greatest achievement was his enthusing and inspiring of students, several of whom are outstanding Botanists of today.

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## JOHN W. NEWMAN

John W. Newman was born November 28, 1884, in Olney, Ill., and came to Colorado with his parents, while a very small boy.

In 1921, Mr. Newman began his career with the Denver Public Schools being associated at that time with Alcott school, later with Skinner Junior High School, and finally with North High School in 1937, from which school he was retired November 28, 1950.

Mr. Newman was an ardent gardener. He was a member of the Organic Gardening Club and a firm believer in organic gardening, and his nursery at 5152 Newton Street, proves his belief was well founded.

He was a member of the Denver Branch of the American Iris Society from the time of its organization in Denver. His work with iris was extensive; he hybridized and developed many new varieties of iris.

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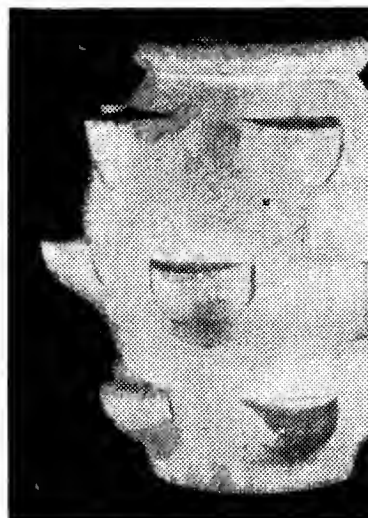
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# The Green Thumb

Vol. 9

JULY, 1952

No. 7

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Picture on front cover taken along Colorado River above Moab, Utah.

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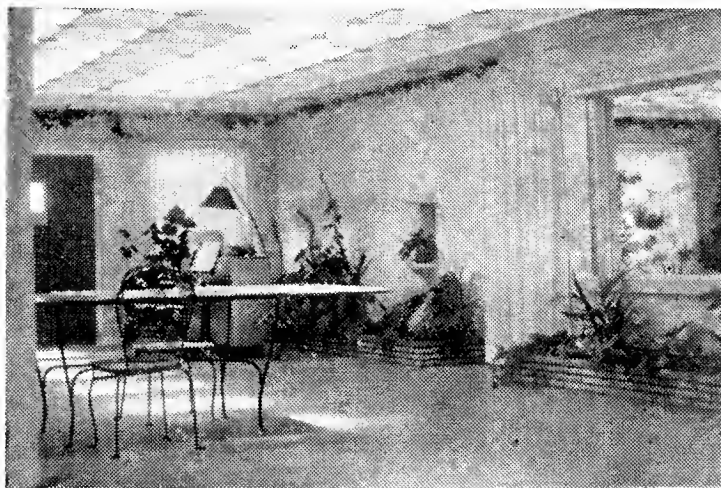
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## JULY SCHEDULE

July 3-6. Trip to Lost Lake, leaving Horticulture House 5 P. M.

July 12-20. Trips to Snowmass and Crystal River Country. Get details of above two trips from June Green Thumb and phoning TA. 3410 or PE. 5565.

July 16, Wednesday. Garden Tour. See story in this issue.

July 27, Sunday. Climb of Woods, Robeson and Engelman from headwaters of Woods Creek and along skyline, exit on Urad Mine. Led by Carolyn Frueller. Call for particulars.

Aug. 3. Trip to the beautiful Butler Gulch or vicinity depending on weather conditions to see the Columbines and other mountain flowers at their best. Betty Miller and Anna Timm will lead.

Aug. 9-10. Overnite trip to West Portal and climb to James Peak, from old Corona Railroad. Alpine flowers should be interesting at this time. Call TA. 3410 or PE. 5565 for details.

Aug. 7. Annual picnic of the Association, held this year on the Waring ranch east of Littleton. Bring your lunch and camp stools and renew your acquaintance with all the other interesting members of the Association. Details of plans and program later.

## ODDS AND ENDS

Three hundred million years ago some ferns grew into large-sized trees with a diameter of 3.5 feet. The New York State Museum shows a reproduction of the sort of forest made up by these tree ferns.



*Linden trees make ideal Parking trees.*

## SCOTT WILMORE SAYS.

"American Linden should be used here more than it is. Be careful not to drown it though."

## IN JULY IT'S THE LAWN

**O**THER parts of the garden require their usual checking for moisture, weeding and control of pests but the lawn is the part of the garden that requires the constant routine of water-weed-mow and fertilize; or does it? Intelligent planning will always eliminate two of these operations and cut the other two in half.

**WATERING.** As a rule (though rules are dangerous in horticulture) most people water too much, or at least too often. Requirements of lawns vary with conditions of soil, slope, shade, weather and season, but on the average a lawn should be so trained that it will do well with a watering once a week. This will have to be a **THOROUGH** watering, however; no little after supper sprinkling. Grass roots reach down farther than is generally supposed, and generally the soil should be soaked at least six inches deep to maintain a trouble-free lawn. To get these roots down there and keep them happy requires, in the first place, that there be some plant food in the soil down there, then, that the roots be encouraged to go down after that food by watering in early spring only when it is really needed, and then later watering is done thoroughly and no oftener than necessary to keep them there. Get away from the regular routine of watering and learn to water when necessary, only. You should learn to dig into the soil occasionally and see how much moisture is there—how deeply your recent watering has penetrated. A pencil or a screwdriver will be a good tool for this. It will be found that a sandy soil will need more frequent watering than a heavy clay, that a shady spot will need much less water than a sunny place, that a south slope will be forever dry and that July will require twice as much water as April. Efficient types of sprinklers will save half the water usually used. A fine fog may improve the atmosphere but may waste much water that blows out in the street and does the lawn little good. A sprinkler that throws too much water in a small spot may allow much water to run off without allowing it to soak in where it is really needed.

To do an efficient job with present equipment it will often be necessary to water a spot a few minutes, move to another and come back again later, repeating this system several times. It is just as bad for a lawn to overwater, and keep the soil continually soggy as it is to not water enough. Grass must have some air around its roots as well as water, and keeping the soil continually soggy with too frequent waterings prevents this. By learning to water more thoroughly and less frequently you may cut watering time and the amount of water used almost in half—and the lawn will be better for it.

**MOWING.** Why do most people mow the lawn too short? Just because the neighbors do it, I guess, because it is bad for the lawn. Grass can only grow through the action of the sun on the green blades and when these are continually cut down to mere stubs it can not generate sufficient energy to grow vigorously. Two inches high would be a better way than to cut at the usual inch. Mowing should be frequent enough so that the clippings can all be left on the ground. If the grass is allowed to get 4 inches tall and then cut to one inch high this is impossible, but if it is cut at three inches high and only one inch cut off the cuttings will all fall down among the remaining grass and form a valuable mulch. This mulch will help to hold the water as it is applied, so that it can soak in instead of running off,

it will form an insulation to help prevent its escaping too soon and it will keep the surface of the soil looser and of more even temperature. A good lawn should show no bare soil but should have a thick mulch on the surface.

**WEEDING.** Any new lawn will have some weeds regardless of the seed or fertilizer used, for many of these weed seeds are in the soil to begin with. Most of these are annuals and are best controlled by mowing. There is usually less damage to a new lawn by simply mowing the weeds than trying to pull them. The annuals will disappear in time, then there will often be the problem of controlling the perennials. Dandelions and plantain are easily controlled with an application of one of the 2,4-D weed killers, if applied at the right time, and more persistent weeds like Euphorbia, Chickweed and Yarrow will often disappear if given about three applications of weed killer about a week apart and during the period of rapid growth. Some of the coarser wild or introduced grasses may become a pest. Some of these will disappear with frequent mowing and others can only be dug out. Generally a lawn that has been planted in good soil, full of humus; has been watered carefully, and a surface mulch allowed to accumulate, will be little bothered with weeds. Keep such a dense cover of Bluegrass that there are no bare spots for weeds to get started. This is especially true with Crabgrass, for it must have bare soil with the sun shining on it to germinate the seed. Watch for the first beginnings of infestations of weeds or crabgrass and get them then. Here is truly where "a stitch in time saves nine", for many a lawn allowed to get full of dandelions, plantain and crabgrass would be easier cared for if spaded up and replanted. If you will make conditions favorable for the growth of bluegrass and unfavorable for weed growth you will be little troubled with the weeds.

**FERTILIZING.** If a lawn is started in soil which has been properly prepared with humus and plant food, thoroughly incorporated in it, there should be no necessity of frequently fertilizing; but the unfortunate fact is that 90% of our lawns have been started in very poor soil and so are benefitted with additional food supplied by surface applications. An organic fertilizer is very important, but can only do its full work when thoroughly mixed in the soil before planting or is used largely as a surface mulch, where it will gradually allow some plant nutrients to leach into the soil. There are no standards for the sale of organic fertilizers and few home owners can tell whether they are getting good material or bad, and there is, of course, the continual risk of adding weeds to a good lawn. This weed introduction is overemphasized, however, unless there are bare spots in the lawn which should not be there. If a lawn is weak and making poor growth after it has been carefully watered and mowed it may often be greatly benefitted by an application of a quickly soluble chemical fertilizer. These materials are more easily leached down into the soil where the roots can reach them and may cause a decided improvement in the plant within a few days. Usually a small amount of these highly concentrated materials applied frequently will give better results than when large amounts are used infrequently. Do not use these materials unless needed and then not in such a way as to discourage the roots going deeply in search of nourishment.

Many lawns planted in good soil, and mowed rather high, with all the clippings left on the surface, have been trained to need water only once or twice a month and have gone many years with no additional fertilizer.

# MEETING THE PLANT FAMILIES

## SOLANACEAE: *Nightshade Family*

By L. J. HOLLAND

COMPARATIVELY small as plant families go, this group is very important from both an economic and decorative viewpoint. The importance of this family is readily apparent when one realizes that it contains such food plants as Potato, Tomato, Eggplant and Pepper (Cayenne and Pimento), flowers like Petunia, Velvet-throat and Butterfly-flower. Of course, rogues are sometimes found among the elite of society, so we have here such pernicious weeds as Buffalo-bur and poisonous plants like Jimson-weed and Deadly Nightshade, although these last two do possess certain medicinal qualities.

Since this is such a varied family, it would be folly to try to enumerate all the pests and diseases that prey upon the various members, and cultural practices will be omitted for the same reason, except as to members that are not too well known to the average gardener. It is better to devote this space to the relationship of some of the better known members, and, I hope, to acquaint you with some strangers that are worthy of your consideration.

**SOLANUM:** This is by far the largest and most important genus, containing such species as *S. tuberosum* (Potato) and *S. melongena* (Eggplant). Tomato (*Lycopersicum esculentum*) is listed by some writers as *S. lycopersicum*.

*S. pseudo-capsicum* (Jerusalem Cherry) is often grown as a pot plant and is often offered by florists at Christmas time. Fruits are similar to a miniature Cayenne Pepper, and colors of white, yellow and red are on the plant at the same time, depending on their degree of ripeness.

*S. integrifolium* is known to the

trade as Love Apple. The bright orange or scarlet fruits, one to two inches across, are quite decorative in a winter bouquet. A favorite of Grandmother's garden, it may be grown in much the same way as the tomato. Start seeds early indoors and transplant after all danger of frost.

*S. nigrum* (Wonderberry; Garden Huckleberry) is offered by some seedsmen, but is not worthwhile, in fact, in places it has become a noxious weed.

*S. triflorum* and *S. rostratum* (Buffalo-bur) are common weeds, especially in sandy soil.

**CAPSICUM:** To this genus belong all the garden peppers, from the hot little Tabasco and long Mexican Chile to the sweet California Wonder and Ruby Gem, used for salads and stuffed peppers. In fact, Bailey, among others, classes all forms as varieties of *C. annum*; others give each variety its own specific name. I really think there should be at least two species; the varieties wherein the calyx embraces the base of the fruit, and those where it does not. With one exception, this pretty well differentiates the pungent from the sweet, too.

**NICOTIANA:** There are only two species of this genus commonly cultivated; *N. tabacum*, Tobacco, and *N. alata* var. *grandiflora* (commonly known as *N. affinis*) that is grown in the border as Nicotiana or Flowering Tobacco. *N. sylvestris* and *N. noctiflora* were once quite popular, the latter being very fragrant.

**PETUNIA:** Plain or ruffled, single or double, and in almost every color, except there is no true blue, clear red or yellow. Combine these assets with ease of handling and





*Salpiglossis. Photo by Charles J. Ott and Bruce Korfhage.*

adaptability and it is slight wonder they are such prime favorites. All garden forms are varieties of *P. hybrida*, a cross of two or more species.

**SALPIGLOSSIS:** Velvet Flower: A very attractive border annual. *S. sinuata*, the only species generally offered, has a wide color range and the flowers are delicately veined. Essentially the same culture and uses as the *Petunia*.

**NIEREMBERGIA** (Cup-flower). *N. grandiflorum* in the purple variety is a very handsome plant for the low border. Readily grown from seed.

**DATURA:** Although *D. stramonium*

(Jimson-weed) is correctly classed as a weed, its sister, *D. suaveolens* (Angel's Trumpet) is a rather showy garden subject in its double form; a trumpet-in-a-trumpet arrangement.

**PHYSALIS** *franchetti* (Chinese Lantern) is sometimes grown for its bright red fruits which are useful for winter bouquets. *P. lanceolata* and *P. longifolia* (Groundcherries) are common field weeds.

**LYCIUM** *vulgare* (Matrimony-vine) was once used quite extensively as a hedge. Unfortunately, it is still met with occasionally.



## HELP! YOUR PLANTS ARE DROWNING! WHAT TO DO ABOUT IT

M. WALTER PESMAN

**M**OST plants will tell you what is ailing them, if only you understand their language. Long before a plant is killed by drowning, it takes on a sickly-yellow, watery look, and it is apt to grow slim and weak, as if it were trying to get out of the watery swamp.

Understanding its plaint is a good beginning. The next important step is to know what to do about it. Here is where some well-meaning books may do you more harm than good: their diagnosis may not hold for this region.

If you read for instance in one of those garden guides: "Swamps are usually acid unless surrounded by limestone land"—don't take it for gospel truth. Again they might say: "Poor sandy soils are often acid"—oh no, not in the Rocky Mountain region. The author is right in New England, in Wisconsin, in Tennessee, but he cannot advise gardeners in Colorado.

To come back to our drowning

plant: what can we throw him for a life-belt? Not lime, nor anything else to correct an acid condition. For the chances are that the soil is already too alkaline.

Proper drainage is, of course, the basic remedy, either by providing a surface outlet or a drain-tile underground. Just putting sand in the ground is seldom a remedy.

Where drainage is difficult to provide, we may have to select the sort of plants that can "take it". And there again, keep your tongue in your cheek when you look up lists for shade and poor drainage.

The following list which I found in a respectable book will do you little or no good; it fits an acid soil with shade and poor drainage.

"For shade and poor drainage use: Trillium, Rhododendron, Huckleberry, Blueberry, Magnolia, Jack-in-the-pulpit, Cardinal-flower Sweet Pepperbush, Wintergreen, Azalea, and Spicebush."

Well, if you follow that advice, you'll have a beautiful plant cemetery before long; hardly a one will



survive the "acid" soil—which wasn't acid to begin with.

Enough of what not to do; let us see what *might* have a chance in our shady, swampy place.

Let us begin with annuals. Shady places are seldom good for annuals. But Scarlet Sage (*Salvia*) will take as much as any. Others in line are *Torenia* and *Vinca rosea* (Madagascar periwinkle). Both are difficult to buy, being seldom grown by greenhouses. Both are good looking annuals, and not difficult to grow.

Fuchsias can be bought as potplants and can take much shade. Remember that the average fuchsia and the average *salvia* are not on speaking terms as far as color is concerned. In other words, they swear at each other.

Quite a few perennials can stand both shade and poor drainage. There are two kinds of day lilies, *Hemerocallis* and *Funkia*, both with many varieties. Many of our *hemerocallis* are actually Denver products, being originated by our own Le Moine Bechtold. And are they good-lookers!

Bleeding Hearts are as much at home in shady places as ferns and do not require much "petting"; they like to be left alone and under that condition are sure to surprise us year after year, just at a time when we had all but forgotten about them.

For low ground-cover the perennial periwinkle, often called "myrtle" is hard to beat; it grows in shady spots

and stands all sorts of neglect. The small type (*Vinca minor*) is the more common one, and spreads rapidly; *Vinca major* is more conspicuous in the size of both leaf and flower, but is less hardy. Both are practically evergreen. Violets are almost as easily grown in shady places, and so is Lily-of-the-valley. Both can stand quite a bit of moisture. And don't forget Forget-me-not!

Among taller shade-lovers are Monkshood, Baneberry, Snakeroot, and Foxglove. Meadow-rue and Columbine come to mind as "naturals" in shady, damp spots.

Comparatively few shrubs can stand wet feet and shade. Among the willows there is a choice plant from the arctic regions with delicate blue-green leaves and slender twigs, *Salix purpurea* or Dwarf Willow. Arrowwood (*Viburnum dentatum*) and Five-leaved *Aralia* (*Acanthopanax sieboldianus*) will grow in shady, rather wet spots; the latter may even compete with tree roots. Coralberry, of course (*Symphoricarpos orbiculata*) will save almost any difficult situation; one of those "dependables" that gets little thanks except name-calling. ("Oh, but that is nothing else but common buckbrush.")

Perhaps all this is a queer way of dealing with "drowning plants". Instead of throwing them a life-belt, this is more like showing which plants can take a mild case of drowning.



## LIGHT AS A GROWTH FACTOR

By ALEX N. KLOSE

Horticulturist for the Milwaukee Equipment Mfg. Co.

NOT too many years ago newspaper headlines announced the fact that scientists had solved the mystery of the atom through the discovery of its structure and its ability to be separated. As a result of this disclosure there is perhaps no other word in the English language which is given more prominence, results in more vigilance, and causes more anxiety than the word "energy".

Atomic, nuclear, and cosmic energy are terms now commonly used to mark another influence of science. The old saying, "There is nothing new under the sun" might be applied to these findings. For, actually, long before Man was placed on this little planet Earth, the Creator put into action a form of energy, which, after having been stored through the ages, is today furnishing civilization with its everyday needs. This timeless, stored energy—slow to accumulate and often quickly and wastefully spent, used by Man in the form of heat, power, foods, drugs, and an innumerable list of other aids, had its inception in a powerful ray of sunlight which a tiny leaf held captive for its life—and for that which was to follow.

This trapping and storing of light which has been taking place since the very beginning of time, links the leaf and its green coloring matter to the Infinite. For, surely, the sun—a mass of gas with an estimated temperature of 20 million degrees, 90 million miles away from the Earth, bombarding it through an ocean of air 100 miles deep, with light rays traveling 186,000 miles a second—must be functioning through an intelligent direction. If this is true, then there must be a

purpose for this control of light energy which makes a leaf the nursery of life.

This further suggests that Man cannot escape Nature and therefore should not be unmindful of it—for, it is all around him each minute of the day and night, regardless of where he lives. Man often forgets this fact, perhaps because he puts Nature in a dark cubbyhole all by itself; and, by so doing, makes it a strange, unknown, unimportant part of his everyday existence. Unless this attitude of indifference regarding the importance and value of the things which help to keep the good earth green is changed, conservation of our natural resources will become, of necessity, another compulsory regulatory program.

To make Nature a real pleasure and an asset—one which is not only good for the physique but also for the psychosis, a gardener should make it a vital part of all his activities. A gardener who does so puts into practice the thought suggested in the quotation from Carlyle's translation of Goethe's "Faust"—in which, the spirit, conversing with Faust, says, "'Tis thus at the roaring loom of time, I ply and weave for God the garment thou see'st Him by." These words should be of special significance to every gardener; because, in reality, a gardener is a person who goes into partnership with God—to make a beautiful plant! To grow a beautiful plant requires a knowledge of such growth factors as soil, moisture, temperature, plant nutrients, light, and all the others. Of these factors, the importance of light and the part it plays in the development of a plant



is too often given very little or no consideration. A summary of light and the contribution it makes to a successful garden program should therefore be of helpful interest.

The process whereby carbon dioxide, a waste product of all breathing animals, is converted into a substance which builds the structure of a plant is known as photosynthesis. The word is of Greek origin and means—the putting together by means of light. This photosynthetic process takes on an added importance when its contribution to plant growth is considered.

The leaf structure of a plant, like every other living thing, is made up of tiny divisions called cells. These cells are filled with chloroplastids, a substance through which light combines the carbon dioxide of the air with the water taken from the soil. Sugars and starches are the first products made. These in turn are changed into a great number of substances needed by the plant, such as proteins, fats, resins, and a number of others. Not too much is known about the manner in which these changes occur, and they therefore remain one of Nature's secrets. There is, however, a little known about the actual process. To accomplish this food-making in the leaf, energy supplied by light must be present. The light rays are absorbed by something in the leaf, enabling the completed change to take place. The growth factor—light, plays an important role, not only in bringing about these changes, but also in determining the rate of carbon dioxide absorption, a substance vitally needed in the conversion process. The carbon-oxygen exchange cycle activated by light is of such great importance that if anything should happen to upset its normal functions, all animal and green plant life would disappear from the face of the earth.

Some scientists are of the opinion that the glaciers, those great mountains of ice which covered large parts of the earth on several occasions, resulted from an upset in the balance which existed between plants and animals. It is a known fact that before the Ice Age—extremely large plants such as giant ferns, and trees as large as the great redwoods of the West, covered much of the earth. It is sometimes theorized that during this period there were not enough animals to use up the oxygen transpired by these plants, which, in turn, effected atmospheric temperature and wind currents and resulted in the glacier formations.

It has been estimated that a plant with 150 square yards of leaf surface requires an amount of carbon dioxide equal to that expelled by one man in a year's time. In return, the complex structure of the leaf, working along with light, returns to that person for the carbon it retains, an amount of oxygen equal to his needs for a year. This remarkable exchange system takes place in the small openings usually found on the outside of the leaves. These openings, or stomata, microscopic in size, must be present in large numbers in order to carry on the carbon-oxygen cycle.

Familiar plants to the gardener such as hydrangea and lilac have 160,000 of these openings to the square inch of leaf surface while the leaf of the black walnut tree has nearly 300,000. The leaf, upon which over 90% of a plant's growth is dependent, is sometimes compared to a machine which requires energy to make it productive. The mechanics of food-manufacture in the leaf—like a machine, are dependent upon energy supplied in the form of light. A machine which does not receive enough energy does not produce a normal output of an end product. In the same manner, a leaf

which does not receive the proper amount of light cannot carry on its food-manufacturing process at a high rate of efficiency.

Perhaps the above consideration of light may appear to be of little practical value or application. Actually, many gardening practices are carried on, perhaps unknowingly, around the growth factor—light. Most everyone is familiar with various types of plants which are limited in their growth to certain light conditions. For example, it is known that roses, carnations, and sweet peas cannot be grown in dense shade. It also becomes apparent in mid-summer that these very same plants stop their flower production as soon as light intensities reach their maximum. In mid-summer too much energy is supplied to the leaf machinery. This, combined with high temperatures, slows up a normal carbon-oxygen exchange upon which all cell development is dependent. Grapevines, roses, and other types of climbing plants are staked, trellised, and pruned so that the leaves receive a maximum amount of light. The pruning of shrubs and trees is done, at least in part, to lessen the shade cast so that all leaves can perform their normal percentage of work.

Often high temperature and low humidity is associated with high light intensity. This results in a retarding of cell division and general growth. The natural dwarf growth habits of some plants, such as Alpines, which grow at high elevations, are probably due to light intensities. Conversely, plants growing in a crowded flower border, where the light intensity is not great enough, usually become very spindly and fail to produce a normal crop of flowers because the leaf, the food-manufacturing part of the plant, does not receive enough energy.

Light intensities also contribute to the quality of the plant produced.

Tobacco used as cigar wrappings is an example of the effect that light has on the character of the leaf. The better grade cigars are usually wrapped in leaves of tobacco plants that are grown in partial shade. Here a reduction of light, plus a higher humidity and lower temperature, results in a leaf of finer texture and smoking quality. Vegetables as cabbage, endive, chickory, head lettuce, and many others, reach a certain standard because of the growth factor—light. Cultural procedures are also given some consideration in the growing of such crops as lettuce, radish, celery, and even potatoes, as regards light requirements. The planting time for these crops is determined so that they reach a certain stage of development when temperature and light conditions will be most favorable.

The amount of light present during the various growth stages of some fruit often determines their general vigor and productivity. Some varieties of strawberries develop small runner plants during the 12 to 16 sunshine hours of summer. During this high light intensity period—few, if any, flower buds are formed. When the sunshine hours of summer are reduced to about 10, in the fall, runner growth stops almost completely; but, flower buds are again freely made. The ever-bearing varieties of strawberries are not effected to the same degree by light intensity, and therefore produce flower buds at almost any time of the growing season. In this instance, the growth factor—light, contributes to the everbearing habits of the plant.

The factor—light, which determines the composition of the materials in the plant cells by its intensity has another effect on plant tissue by the length of these periods of intensity. This length of exposure of a plant to

certain light stimulation is commonly referred to as photoperiodism. In fact, plants react to the length of time at which they are exposed just as they do to temperature and moisture conditions. This response of plants to periods of light exposure has a direct bearing on their natural distribution and is often a deciding factor as to whether they can be grown in every back yard garden.

Northern growers of the popular Christmas plant, the poinsettia, have little difficulty in developing beautiful flowers in time for the holiday season. In other parts of the United States the plants come into bloom under ordinary growing conditions several weeks or a month later. This is because the intensity and period of light in this section is not favorable for early bud formation. Indoor gardeners often experience some difficulty in producing flowers on carry-over holiday plants because of lengthened light periods. This disappointment usually results when the period of light is extended by growing the plant in a room which is artificially lighted at night. An understanding of the effect that light has on bud formation will suggest to the indoor gardener that at night the poinsettia be removed from such rooms which are so lighted. Other plants such as the African Violet are also responsive to the correct light intensity. The usual recommendation of placing the Saint-paulia in "this or that" exposure is of little value to a gardener unless an exposure is of the right intensity.

Even such rather common vegetation as grass responds to light conditions. Because grass plants are affected by light, an assortment of grass seed is usually planted. In the planting of such a mixture, one or the other varieties of grasses in the combination will find a light intensity conducive to its rapid development.

While on the subject of lawns—it might be well to point out again that more than 90% of a plant's growth is made through the action of light striking the leaves. This should suggest to the home gardener that continuous short mowings of the grass plant will eventually weaken it to a point where it will become susceptible to attacks by insects and diseases. There is a great deal of experimental evidence available which proves the existence of a relationship between the top growth of a grass plant to its root structure.

A soil which is to support the growth of a grass plant requires an amount of organic material equal to its holding capacity. As there is no practical way of making additions of organics to the lawn soil, every effort should be made to encourage a deep rooting of the grass plant. A maintenance program which develops a deep rooting will be returning to the soil, by way of old grass plant roots, the organic materials used up in the production of the crop.

Many lawn failures can be traced to the growth factor—light, as well as to the lawn mower or its incorrect cutting adjustment. Lawns made up of the usual seed mixture of Kentucky Blue, Redtop, Fescue, and the like, should not be cut closer than 2 inches. At this height enough of the food-manufacturing part of the plant is left to absorb the required amount of light energy. The adjustment of a mower is a very simple operation. It consists of placing the machine on the sidewalk and measuring the distance between the walk and the knife-bed. If this distance is less than 2 inches, it can be increased by loosening the bracket bolts which hold the wooden roller. After loosening the bolts permit the roller to drop as far as it will go. Retighten the bolts and again measure the distance between

the walk and the knife-bed to see if the desired depth has been obtained. If through adjustment the desired depth has not been obtained, additional slotted pieces of metal can be attached to the original brackets, or a clothes line can be wound around the wooden roller to increase the height of the cut. In making these adjustments remember that it is the wooden roller which determines the cutting height. Do not tamper with the set screws which hold the knife-bed.

The proven fact that over 90% of a plant's growth is made by the action of light on its leaves can also be applied to the garden weed control program. Weeds, like cultivated plants, depend upon light for their growth and development. Because of this it

is reasonable to conclude that the removal of the food-manufacturing part of the plant, its leaves, will eventually result in its eradication. This principle should be applied to all weed control programs. It is not necessary to stir the soil to a depth of 3 or 4 inch when removing weeds. The control of weeds should consist of a scraping process rather than one of deep soil disturbance. Very often the moisture loss which results from a deep stirring of the soil causes a greater check in growth to the cultivated crop than is caused by the weeds.

When planning your next year's garden remember the important contribution that the growth factor **LIGHT** can make to a successful program!

## GARDEN CLUBS FOR ALL GARDENERS

MRS. CHAS. WESKAMP

**I**N MOST communities we observe everywhere large numbers of bright new homes. Evident also are the new plantings of lawns, trees and flower beds. It is probable that many of these new owners are inexperienced in the ways of gardening in our semi-arid climate. Joining garden groups will prove a pleasant and profitable experience as these clubs have much to offer any gardener. Among these offerings are the following:

(a) An association of friends having a common interest.

(b) Knowledge of correct planting for improving and beautifying home grounds.

(c) Accurate information concerning new and improved varieties of plants fitted to local climatic and soil conditions.

(d) An exchange of ideas; sharing skills and experiences.

(e) Models for conducting and judging flower shows.

(f) Assistance in recognizing and naming species of plants.

(g) Supplying an opportunity to work together on community projects.

(h) Membership in state and national federations.

Garden clubs have the usual officers, working rules or by-laws, and a definitely planned program to fit the needs of the group. A membership of ten makes the club eligible to belong to the State Federation of Garden Clubs upon the payment of the required dues. This organization leases the Garden Center in Denver for the use of its members for meetings, flower shows and judging schools. Here it maintains a library offering free use of books, slides, pamphlets and other program materials.

There are many specialized groups such as men's garden clubs, organic gardening, cacti, lily, rose, iris and



African violet societies, etc. These often meet in the homes of the members sharing member gardens and projects.

It is possible to reach people interested in joining or forming a garden club by placing a notice of the time and place of the meeting in local papers; making announcements at community gatherings, church meetings or other clubs. Some broadcasting stations have special programs for such announcements.

The county agent, State Federation of Garden Club officers, and various local horticultural organizations are helpful in assisting in the initial organization.

Some of the sources of material and speakers for programs are:

(1) Rocky Mountain Horticulture is Different, by George Kelly. This book is useful as a text, for accurate information and as a guide in planning a program. It is sold at most book stores and magazine counters and costs \$1.50 per copy, less in lots of ten or more.

(2) The Green Thumb published by The Colorado Forestry and Horticulture Association. A monthly magazine for \$3.00 a year. This gives correct information for use in this region. The subscription includes membership in the Association and use of Horticulture House library and other facilities.

(3) Library books. Public libraries maintain a horticulture section. Horticulture House Library, 1355 Bannock, Denver. State Federation of Garden Clubs library, Garden Center, Denver.

(4) A. and M. College at Ft. Collins will send a list of publications suited to a horticultural program. Many of these are free or cost only a few cents. They are based on experiments conducted in this state.

(5) Seed catalogues and nursery

advertisements offer many helpful suggestions.

(6) Dealers in seeds, equipment, supplies, insecticides and fertilizers often provide speakers for meetings. This advertises their products and they are of practical help in round-table questioning.

(7) State and County officers will explain the projects of their departments. These might be, The Forestry Dept., Highway Departments, Health Dept., state and county officials interested in improving highways and wayside parks or state parks, pest control bills, etc. These busy men are glad of an opportunity to place their plans before working and interested groups.

(8) Chairmen and officers of the Colorado State Federation of Garden Clubs. There are many members within the organization who specialize in varied flower culture and who are available as speakers. There is a practical working class in flower arrangement held the first Monday of each month at Garden Center. This is open to the public.

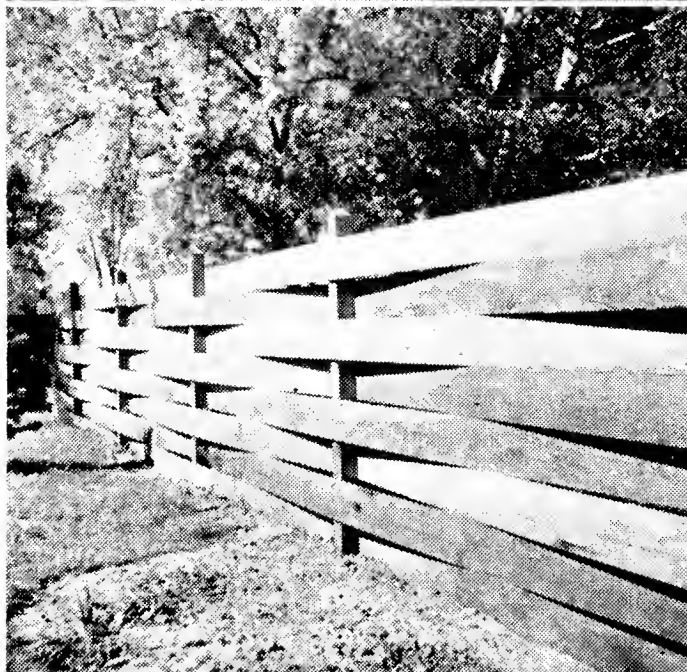
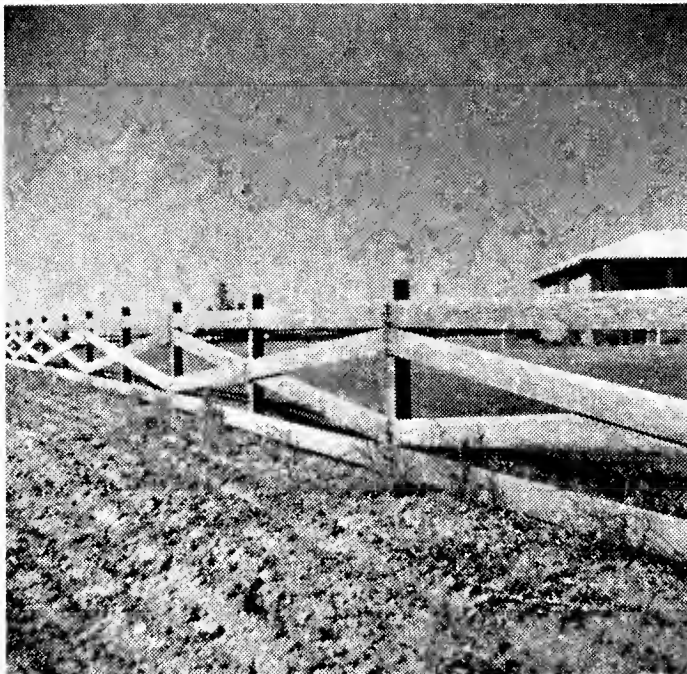
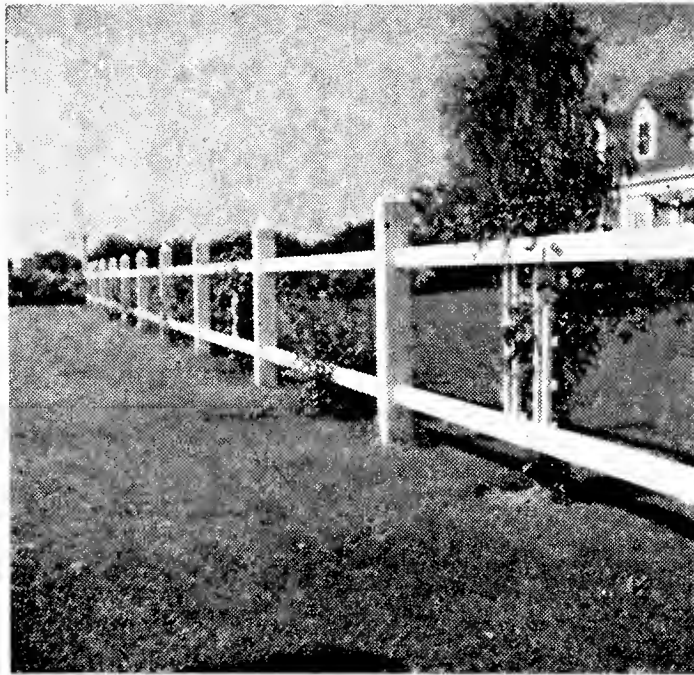
(9) Conducted garden tours. These are often benefit affairs where the fine home gardens are opened for public inspection charging a small fee. As a club project it is a fine opportunity for a demonstration of correct and pleasing gardening practices.

(10) Conducted trips through city and public greenhouses and gardens. These expert supervisors are willing to answer questions and supply needed information.

(11) Flower shows and county fairs. The Colorado State Federation of Garden Clubs is a member of The National Council of Garden Clubs representing forty-two states and club memberships of nearly 300,000. The Men's Garden Clubs have a large federation also.

## FENCES AND

THE home building trend is now towards the small place in the country, near town, where more freedom and space can be had with the conveniences of the city close by. This has caused a renewal of interest in fences and other means of enclosing one's property. The purpose of such a fence may be to keep children or dogs in or other stock out, it may be to screen some undesirable view, or allow greater privacy to the owners, or it may be simply to define the property lines and be ornamental.



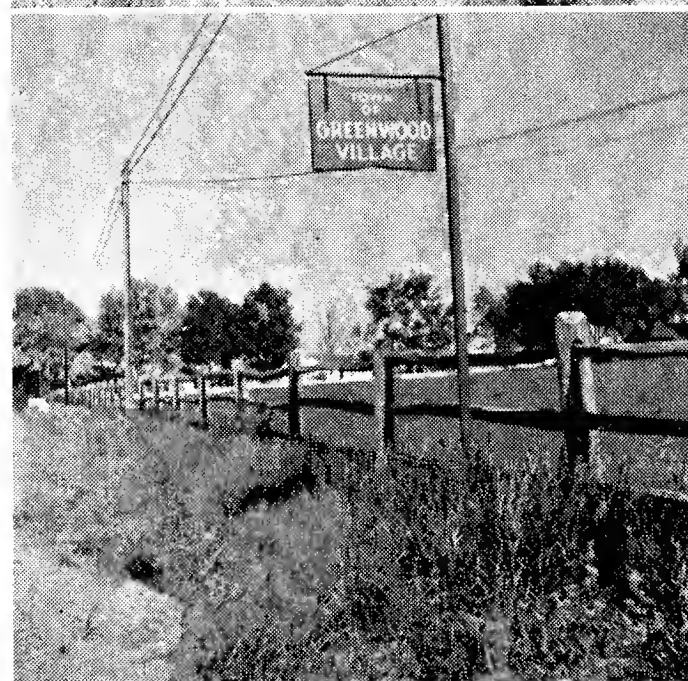
*Above: Modern Ornamental fences in the new area southeast of Denver.  
Right: Ornamental fence and stone wall at the L. V. Woods place,*





## ENCLOSURES

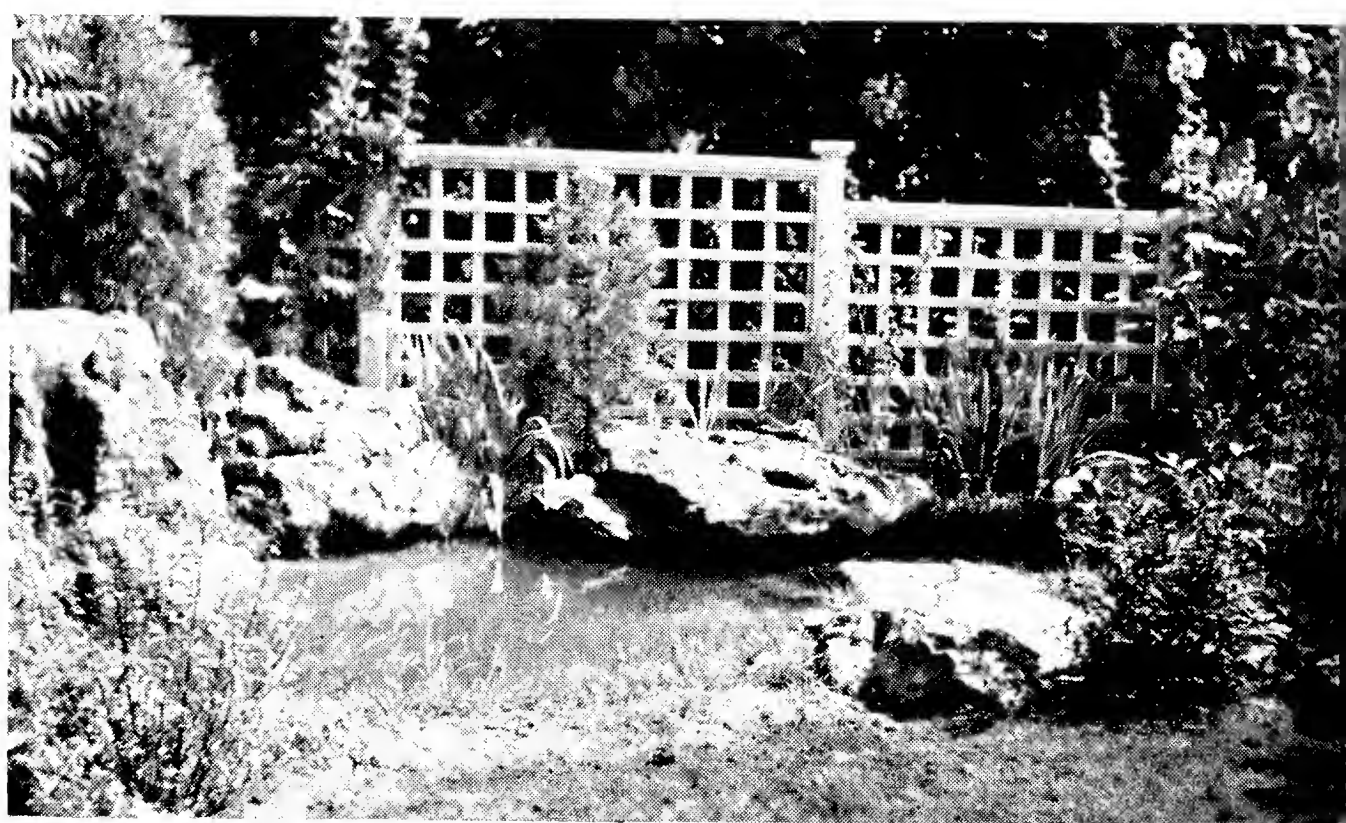
Some of the older types of fences are still popular such as the white wooden picket and the wrought iron, and the recently popular split cedar and chain link wire are very adaptable to the completely modern property. More and more, is seen, however, original designs in wood or stone or tile which add an individual interest to one's property and fill a particular need. Here we are showing some of the good from the old and the new to give ideas which may be adapted to every one's needs.



*Modern fences for ornament and protection in the Greenwood Village area south-east of Denver*



*Ornamental gates of iron and split cedar at Horticulture House.*



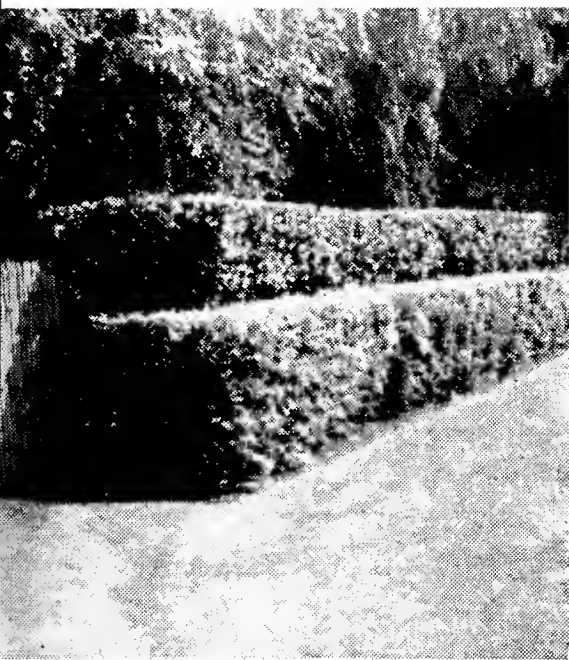
*Above: Ornamental fence at 4570 Moncrieff Place.*



*Left: Fence and gate at the home of Mr. and Mrs. E. R. Kalmbach.*



*Ornamental wall at  
garden of Douglas  
Havens, Denver.*



*At Left: Combination of Split cedar and trimmed hedge.*

*Below: Ornamental wall and grounds at home of Mr. and Mrs.  
James Dewsen, Denver.*



## LOOK AND LEARN GARDEN VISITS

By VAHNA BROMAN

**J**ULY 16 will be another big day for garden lovers. The two previous Horticulture House Garden Visits have been good examples of the splendid variety of gardens that are to be visited by you and your friends on the two remaining visits. There are seven gardens included in this July tour.

When you step into the garden of Mrs. Maurine Bush at 779 Kearney, you can expect something you'll not soon forget. Mrs. Bush has made use of every available space in her small yard, and yet nothing seems crowded. Even her ash pit is a spot of beauty, with flowers almost completely hiding it from the house. When you visit this garden, there will probably still be roses in the bed that rests out beyond the covered back porch. On either side of the yard two rows of July flowers leave only enough room for strips of green lawn carpets to complete the picture that shows the touch of an artist's hands.

Mr. Frank Harris, a landscape gardener of unusual ability, has, with the untiring help of Mrs. Harris, carefully plucked the beauties from nature and planted them in his garden at 2256 Franklin. From the large, unusual rock garden in the front to the many flowers and trees in the far back of this spacious yard, there seems to be nothing left out. The green covered patio at the back looks out on nature at its best. Mr. Harris molded his own bird bath that rests comfortably in among the flowers for the birds to enjoy to the fullest. A large green frog sits on an old tree stump to partially hide it from view. The garden is truly a gardener's masterpiece, and you will want to linger awhile here.

At 169 Corona, the home of Mrs.

Christine Hutchinson, there are eleven lots of peaceful beauty. From the complete play house at the back to the barbecue pit at the far end of the sunken garden, you will enjoy every minute of this unusual beauty spot. As you step into this garden the first thing to catch your eye will be the pool beyond the covered porch. From here you may stroll down "lovers lane", complete with a tiny stream that winds around here and there, several miniature bridges, and a bit of a waterfall. This is a live garden, a garden in its natural setting that is never without flowers. Maybe you would like to swing a little as Mrs. Hutchinson does on occasions. Or perhaps you would just like to sit in the garden house and look at the loveliness all around you. You can, if you want, sit on one of the many small benches underneath the trees in "lover's lane" and watch the little stream or just listen to the waterfall. This is a warm garden, a garden you won't be afraid to get acquainted with.

At the Victor Lombardi home at 2341 Locust you will at once be attracted to the neatly trimmed evergreens in the front of the house. In the back yard is a small garden that will be of special interest to those of you who have little space. The plantings on the slanting driveway fence that encloses the garden add much to its beauty. Pansies around the border, and Dahlias "planted by the buckets full" will furnish much of the color in this garden.

Mr. Frank Rhodes is a florist by trade, and his home at 1720 Olive reflects the ability possessed by few to paint pictures of unusual beauty with nature's flower masterpieces. The rose covered fence and the Rus-

sian Olive hedge at the back frame this garden most satisfactorily. Mr. Rhodes has made use of the closed alley, and his flower arrangements throughout the garden are unusually effective. Straight lines are prominent here, with tiny borders of color everywhere. This is a neat, outstanding garden, that will be of a great deal of help to you, I am sure, in discovering improvements for some of your gardens.

The A. W. Skuderna's live at 2350 Leyden, and they welcome you to sit on their lattice roofed back porch and enjoy their flowers with them. There's color everywhere you look in this lovely garden. In one corner, among the evergreens, rests a bird bath. Near it are two white iron chairs and a love seat inviting you to sit awhile. Underneath the grape arbor might be where you would choose to stop, there are benches there too. The neighbors on all sides of the Skuderna's have unusually colorful gardens too, and from your back porch resting place you are able to enjoy them too.

Another landscape gardener welcomes you to his garden at 226 Clayton. Mr. and Mrs. John Waugh are happy to have you share with them the beauty of their new home. The garden here is new, having been started only a year ago. Their yard is landscaped with the yard of the house next door, giving it an added note of spaciousness. The large covered patio at the back of the house, with the iron railing around it, the white picket fence around the garden, and neatness of this new garden spot, make this an especially attractive home.

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## "LOOK AND LEARN" GARDEN VISITS

### MAY REPORT

By MRS. PAUL L. HASTINGS,  
*Chairman*

The May "Look and Learn" Garden Visits certainly started off with a beautiful bang. Last year we did not have a May Visit, so we have no figure to compare the May attendance with, but last year in June we had 140 people, July 225, and August 110. This May we started off with 330 guests!

Last year at the end of August, our net income was \$413.00. This year at the end of the May visit, our net was \$492.00!

Our sincere thanks are due those whose lovely gardens were shown in May—the Frank Bentleys, the George Garreys, the Frank McListers, the Jan Schoos, the Lewis Smiths and the B. L. Rosenbergs. Thanks also to our May experts—Herb Gundell, Mrs. Ralph E. Hill, Mrs. E. C. Horne, Sam Huddleston, Ed Johnson, Fred Johnson, Mrs. Persis Owen, George Stadler, and Dr. Helen Zeiner.

And—we couldn't possibly have managed without our ticket takers and co-hostesses, Mrs. Carl Hieler, Mrs. Paul Broman, Mrs. G. H. Forcade, Mrs. Loren Hilton, Mrs. R. H. Hughes, Mrs. John E. Jensen, Mrs. Edmund Leet, Mrs. Martin Lipsker, Mrs. Robert Lehman, Mrs. R. B. Middleton, and Mrs. Harry Phillips.

And our behind-the-scene workers who have taken care of our publicity, Mrs. Paul Broman, Mrs. H. M. Kingery, Mr. L. C. Shoemaker, and Mrs. Eric Douglas and the Denver Garden Club members are certainly to be congratulated. Sue Johnson Kelly for all her letter writing, and George Kelly and Don Peach for their wonderful radio publicity deserve our thanks.





When we lose our "pep," when good food tastes bad, when friends do not satisfy, when life becomes a bore, when music seems out of tune, when the old dog annoys, when the doctor fails, and the good wife irritates, there is but one remedy and it is found in the forest or on the streams in the big "outdoors."

There we go to church and worship God by conversing with the things He made, listening to sermons from rocks and trees, choir music from the birds.

*From Outdoor America, May-June, 1952, by  
Senator Harry B. Hawes, of Missouri.*

*Photo by Bruce Korfhage.*



## A SUNNY PERENNIAL BORDER

By SUE J. KELLY

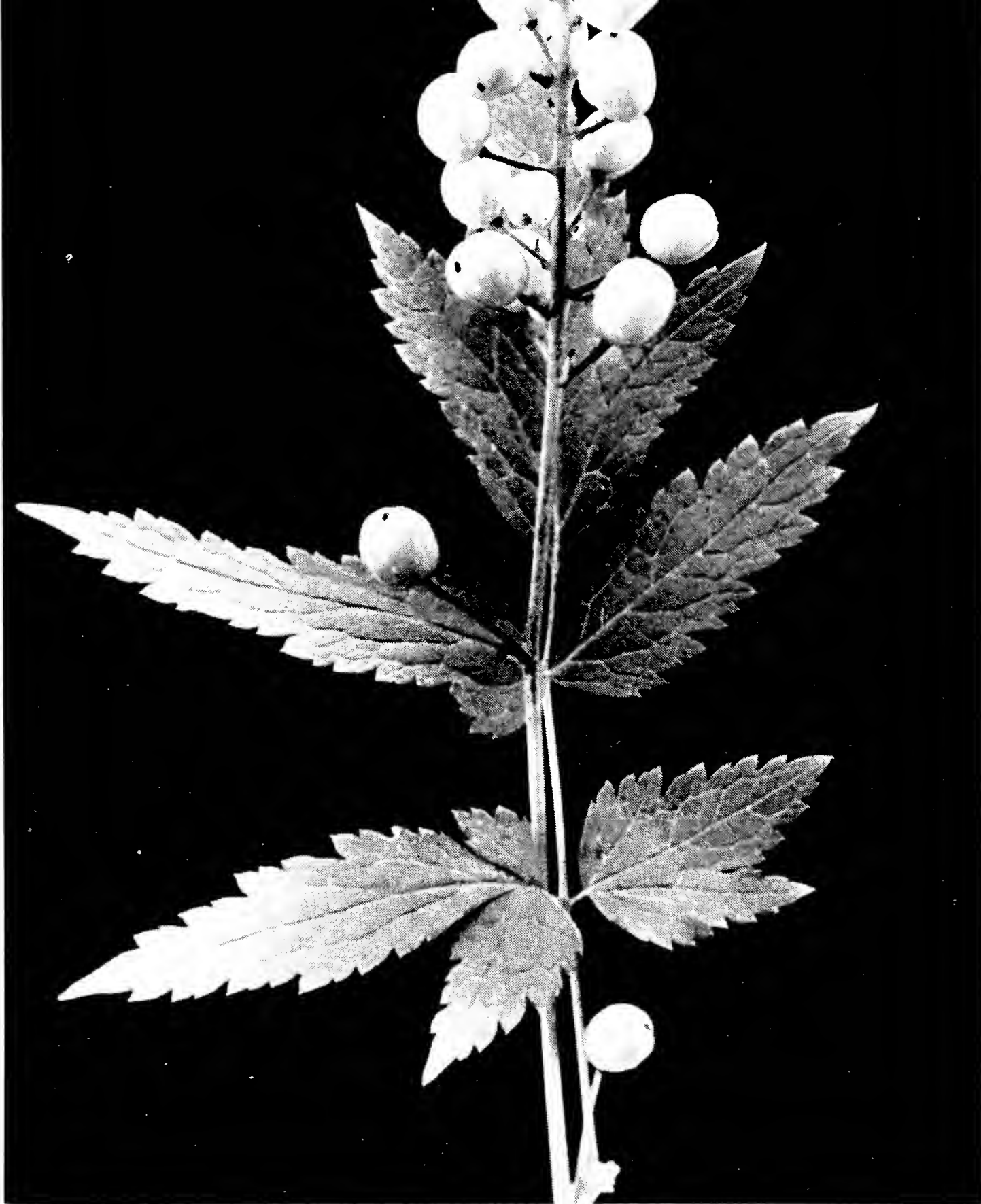
**J**UST what do you want in the way of a sunny perennial border? Dry, hot, arid, sun-loving plants or a mixture? While trying to get an idea, I came across this paragraph in the March, 1949, FLOWER GROWER, and it seemed so appropriate: "Should you come to visit in spring, the rockery bank beside the garage, facing south, will probably catch your attention first. There, following an earlier splash of crocus and species tulips, is a brilliant carpet of hardy trailers such as basket-of-gold alyssum, cerastium, wild sweet-william moss phlox, and wallflower, with high notes on vivid tulips. The steps are massed with forget-me-nots and pansies, and the whole picture backed with tall shrubs which are keynoted by the pink and fragrant Viburnum carlesi with mertensia bluebells at its feet." This from "Mother's garden belongs to everyone" by Gretchen Harshbarger, Shenandoah, Iowa.

Doesn't that paint a picture for early color, and how else could I describe it? I have those same things on a rock wall facing south, only I do have a few sedums, which change with the seasons giving more yellows, reds, whites, and oranges. Then I have added dwarf iris in yellow and deep purple for early color, with later tall growing iris in rainbow colors.

I think one of the most charming full sun borders I've seen has been in the Walter Slagle garden last summer on the "Look and Learn" garden visits. They also have a rock wall facing south in full sun. Let's see if I can recall just what was in bloom at that time—some floribunda roses in shades of reds, white Shasta daisies, sweet-williams, an annual or two (snapdragons, etc.), globe thistle, del-

phinium at the back near the shrubs in three shades of blue, and the whites, with anemones and chrysanthemums spotted in strategic places for later fall bloom, columbines in a riot of color, because you see these plants had a good bed in which to be happy, with their roots shaded and rocks used in such a way as to give them a good mulch. There were evidences of peonies used earlier, in colors of white and bi-colors, oriental poppies which Mrs. Slagle said were the pink shades, with anthemis planted to take the place of the shastas. A cluster of Madonna lilies, with hemerocallis spaced for later bloom. And, of course, for late bloom the phlox and fall asters. Spilling over the wall in spots were campanula carpatica in blues, dianthus in spicy fragrance, violas hiding here and there. Do you want any more?

Using buddleia in your perennial border will give you height at an awkward season when the delphinium is gone. And don't forget violets make a very beautiful addition to your sunny border, and if you are fortunate enough to have the kind that blooms in both spring and fall, that indeed is wonderful. Valerian is a good perennial and veronica adds the touch of blue, which you may be seeking. The hot colors, such as yellows, oranges, and browns, may be had in the yarrows, sunflowers, cone-flowers, and gaillardias, but if these are used, do so in moderation. A liberal planting of gray foliage plants will help immensely to hold the entire border together. Oh, dear! After reading this over I find myself wanting to go out and start planting and re-arranging so that I can include one or two more in a space already crowded to capacity.



*Baneberry, Photo by R. J. Niedrach.*

## VARMINTS

*For Kids of 8 to 80*

SOME who love the out-of-doors have their pleasure dimmed by their dread of the nameless "Varmints" that they populate the wild places with. Actually there are very few things that could or would hurt anyone in our mountains and wild places.

Mosquitos and gnats are annoying at certain seasons, but few other in-

sects need bother. What if a spider, beetle, worm or ant does crawl over the sandwiches. They mean and do no harm. What if they even crawl over us when we are in our sleeping bags.. They need not worry us.

"But, snakes," you will say, "I don't like them." Well, few people do, yet they are mostly harmless. The only really dangerous snake we might

come into contact with is the rattler, and he is seldom found any more except in a few well known areas. The rattler is never found in the high mountains and there is nothing else to prevent one putting down his bedroll wherever he pleases in the high mountains.

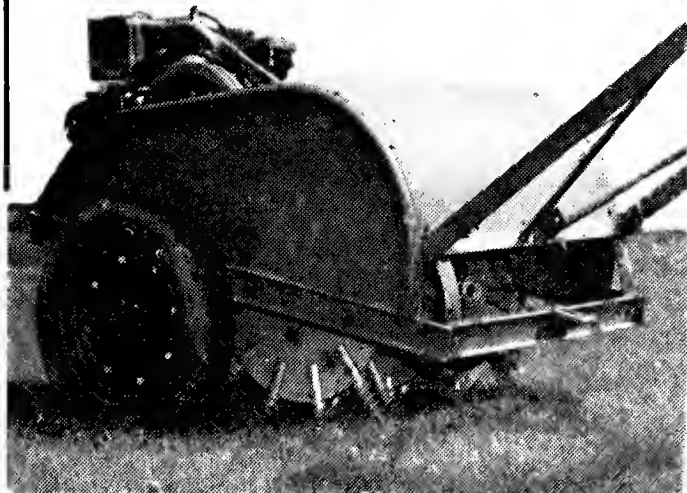
There is only one plant that ordinarily poisons by touch—the Poison Ivy. That plant is easily recognized and avoided. The berries of the Baneberry are about the only ones commonly found that are very poisonous to eat.

Compared to the tropics this is a

very pest-free country. One can hike, or lie down almost wherever he wants with the knowledge that nothing serious will bother him.

It is well to learn the appearance and habits of the few things which might cause trouble and avoid them. Even rattlers are gentlemen (unless they happen to be ladies) and will not attack without fair warning. And who need mind a few bugs, mice, packrats or other varmints. They will go about their business and you can go about yours with no bother to either. (Even skunks and porcupines will do that.)

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## ROSE NOTES

VELLA HOOD CONRAD

The elements excepted—you have enjoyed one period of profuse bloom. It is difficult to say which is more beautiful, our June or September profuse bloom.

The warm days in early May plus a lot of rain brought a host of aphids. The good rosarian does not wait for the bush to be covered. These are easily controlled with Black Leaf 40. Watch for the rose beetle. Best way for these is to go out early and knock into a can of water with a little kerosene in it.

I have always maintained fungus best prevented by regular 10-day dustings. Use a good ready mix, or mix your own. This is messy unless you have equipment. An old-fashioned "daisy" hand churn is ideal for mixing. Tape the air holes in the top of the churn. This formula is good.

- 9 parts dusting sulphur,
- 1 part arsenate of lead,
- 2 parts pyrethrum powder.

I use a plastic cup to measure these. Mix well and dust the roses every ten days.

Of course, you have a good mulch around your roses. This eliminates the need for excessive cultivation, and at the same time helps to retain moisture. This month water copiously, once a week. Do not use the spray on your roses, especially after 4:00 P.M. Water on the foliage encourages mildew during our hot July days, and usually cool nights.

Feed your roses another round of plant food. Always do this after they have put forth such profuse bloom. Have you tried foliage feeding? Rather interesting developments along this line.

Do you cut your roses to encourage bloom? Always leave two leaflets

of five leaves each on a stem.

Pick faded blossoms each morning.

Enjoy your roses. To arise early and walk among your roses is one of the most soul satisfying experiences. You see them at their best—and to look into the heart of a beautiful dew-kissed rose is to see a glimpse of God.

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Mrs. Frank McLister, 445 Westwood Drive, Denver.

## NEATER, REPLEATER, COMPLETER

M. Walter Pesman has just shown us a copy of the fifth edition of his book, "Meet the Natives". It is a book that every one interested in the native wildflowers or plants should own. The new edition is completely revised. It is replete with many new species not before listed, it has a complete revision of nomenclature to include all the newest approved names and it is much neater by having all pages printed on white paper but with colored edges corresponding to the color of the flower, as has been so popular from the first.

Even though you own a copy of one of the earlier editions, you will enjoy this new revision. It can be bought at any book store, direct from Mr. Pesman at 372 S. Humboldt or at Horticulture House.

## THE KEY TO SOIL FERTILITY

Excerpts from article printed in *American Fruit Grower* by R. E. STEPHENSON, Oregon State College.

Few things, contribute more to good nutrient availability than regular and adequate humus renewal.



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In areas of alkali soil, humus acts as a buffer to reduce the severity of the alkali and by improving soil structure helps to eliminate the alkali by washing the salt into the drainage with irrigation water.

There is scarcely any important property of any type of soil that is not improved by humus for the nutrition of plants. In addition to improving the soil, humus materials stimulate root development.

Other values of humus include the stimulation of the important living organisms that are essential in all soils for freeing nutrients to the plant roots, for the production of growth-stimulating hormones, for fixing free nitrogen of the air, for other nitrogen changes that are included in the processes of ammonification and nitrification; in short for converting an inert mass of material into a living and functioning soil.

Nothing else, other than irrigation or drainage as needed, can improve soil moisture properties more than adequate humus renewal. Whether organic materials for making humus are incorporated into the soil or left on the surface as a mulch, there is improvement of the important soil properties. Nature drops organic materials on the surface of the soil and provides earthworms, bacteria, fungi, and other forms of life for incorporating the material into the deeper soil.

Any type of organic material, rightly used, is helpful, whether leaves of trees, lawn clippings, vines, stalks of plants, a green cover crop, compost, animal manure, or straw, or even sawdust can be used to improve the soil. Humus is about 40 per cent lignin and 30 per cent protein. Sawdust has the lignin (is mostly lignin and cellulose), but a nitrogen fertilizer must be used to enable the soil organisms to manufacture proteins to balance the lignin.

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## GARDEN TOUR NOTES

ELLA ROARK

Until you LOOKed and LEARNed in May had you:

Realized how elegant strawberries and raspberries could be in formal arrangement?

Thought of planting ferns under a permanent garden bench or known how out of this world Trollius could be?

Realized that pink Tulips and Bleeding Heart planted under a blooming Bechtel Crab and touched with the blue of Chinese Forget-Me-Nots would so adequately proclaim the miracle of spring?

Known how completely restful a shady garden planted largely in white could be?

Considered what a smart-looking bird house placed in just the right spot could do for your garden?

Dreamed there was a way to grow all the flowers you wanted inside your home in winter without having a cluttered room?

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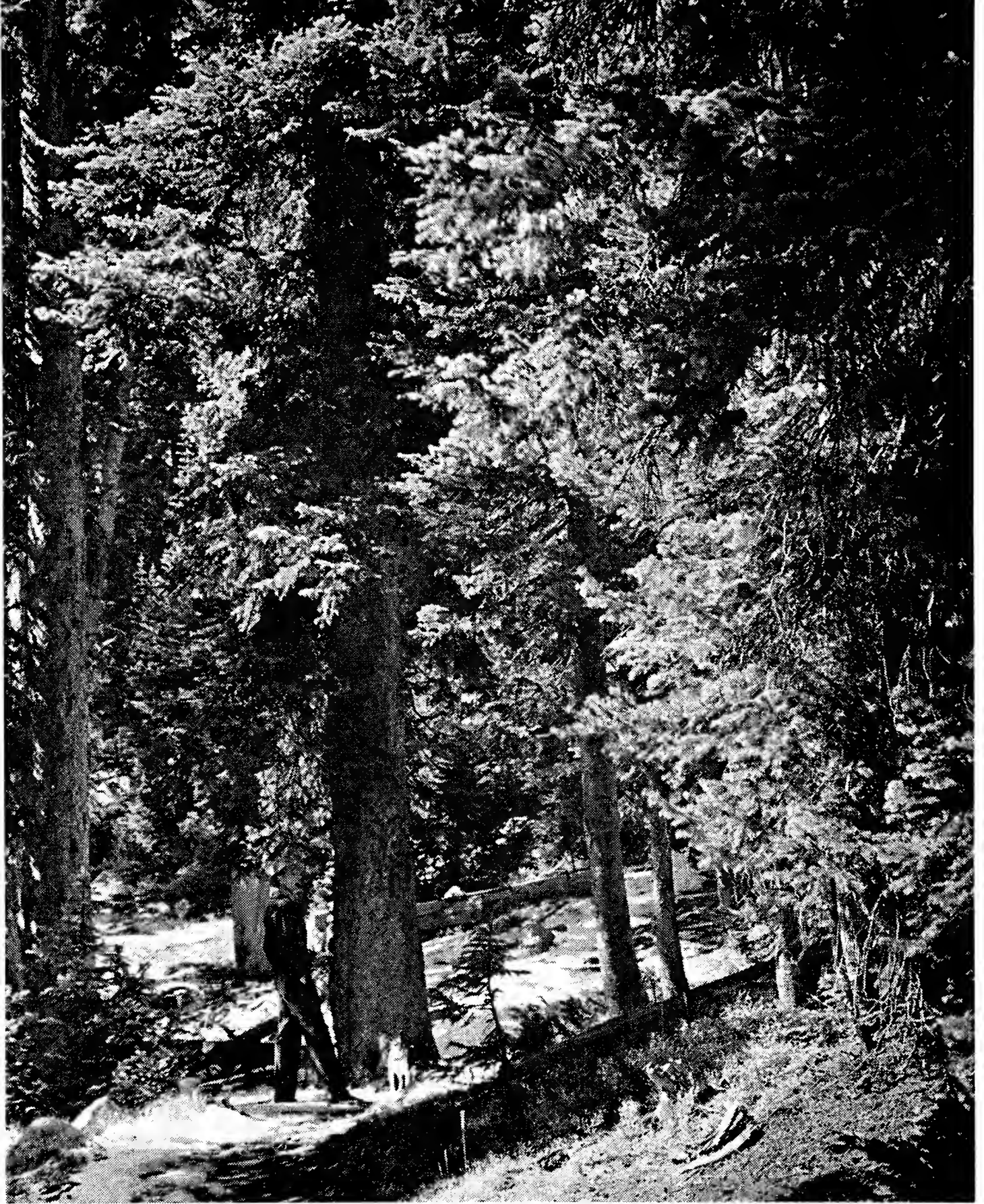
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*Photo by C. J. Ott.*

## WORSHIP IN GROVES AND UNDER TREES

By H. N. WHEELER

Trees have been associated with the worship of idols, and the Supreme Being of the universe ever since the far distant past. Manassas, the wicked King of Israel, set a graven image in a grove. "Ahaz sacrificed and burnt incense on the hills and under the evergreen tree." The Lord told Gideon to "Throw down the alter of Baal and cut down the grove that is by it." The Druids worshipped in groves, especially oak groves, since they held the oak tree in high regard.

Trees and groves have been used as places for communion with God, Jehovah, throughout the ages. Christ often resorted to the mountains and the wilderness places, especially to the Mount of Olives, for prayer and meditation. There is something about a magnificent grove that causes a person to think of God and put him in a worshipful mood.

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# The Green Thumb

Vol. 9

AUGUST, 1952

No. 8

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*Picture on front cover of Gateway to Garden of Mrs. John G. Kerr, 1900 E. 7th Avenue*

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## AUGUST SCHEDULE

Aug. 3.—Trip to the beautiful Butler Gulch vicinity. See July Green Thumb for details.

Aug. 7.—Annual picnic of the Association, held this year on the Waring Ranch east of Littleton. See details elsewhere.

Aug. 9-10.—Overnight trip to West Portal and climb to James Peak.

Aug. 17.—Lamertine ghost town out of Idaho Springs. About 7 mile hike one way. Led by Doris Weith.

Aug. 23-24.—Climb Silverheels near Fairplay, Colo. Led by Mary Lou Cox and Lois Norton.

Aug. 30-31, Sept. 1.—Gilpin Lake trip, northeast of Steamboat Springs, out of old ghost town of Slavonia. Good fishing. Packs may be taken in by horse, or camp at Slavonia.

Sept. 7.—North fork of Thompson, north of Estes Park, to ghost town of original Estes Park Village. Aspens may be in their full color.

Would you like a chuck wagon dinner? If so, let us know. Call TAbor 3410 or PEarl 5565 to register or get further details of any trip.

## ANNUAL PICNIC

August 7—remember that date and set it aside on your calendar! That is the time all members of the Association are invited to get together and enjoy each other and may compare notes on how and what to do in their gardens the following summer. Everyone who has attended these picnics in previous years, has vowed to come again and year by year the number grows so that this year, we are going out to the J. J. Waring Ranch, South University Blvd., east of Littleton and University Boulevard and south on Bellevue Avenue. We will have large signs on the place near the entrance so that you won't go astray.

Bring your own picnic lunches and make up large groups if you wish and really have fun. We will try to have enough coffee for the entire group, and in order to do so, will you let us know if you intend to come? We would hate to throw out any good coffee and still we want to have enough. Time, 5:00 P.M.

After eating, there will be a color moving picture shown by Bud Flynn of the State Game and Fish Department.



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## AUGUST GARDEN REMINDERS

**O**RIENTAL POPPIES should be dormant now, and this is the time to transplant or move them.

Many kinds of lilies may be divided and moved now.

The tops of tulips should be entirely dried up indicating that the bulbs are matured and suitable for dividing or moving if that is desirable. There is no need to move them or lift them and reset them if they are doing all right where they are, and there is no need to leave them out of the ground and dry them off. If they have split up into small bulbs which are now so crowded that they can not bloom, they may be divided now and the larger bulbs planted right back and the smaller bulbs thrown away or planted out to grow up to blooming size. Plant the good bulbs a little deeper this time and not in a very hot location.

If you have not mulched your beds, do so now for worry-free vacations.

Don't be a lawn slave. Water THOROUGHLY about once a week, mow high and leave most of the clippings.

Seeds for many of next year's perennials may be planted now. Check Honeylocust and Birch for signs of dead limbs or leaking places which might indicate the presence of destructive borers.

Continue your program of light feeding of roses and other plants during their slump in blooming period.

Plants may also need extra watering now, but towards the last of the month should be gradually dried up to allow them to thoroughly ripen their wood before freezing weather.

If all the trimming, spraying and weeding should be done up to date the good gardener will still find much cleaning up to do to improve the looks of the garden.

Kill the few bugs that are still feeding on your plants, even though they are apparently doing little harm. This will eliminate many adults to winter over and re-infest your garden next year.

Destroy that lone dandelion or wild lettuce which may re-infest your whole garden next spring.

Give a little application of iron sulphate, sulphur or aluminum sulphate to that chlorotic plant. (This is indicated by a yellowing or paleness of the leaves.)

Plan next year's improvements and replacements now, while the perennial border is in full bloom.

Relax and enjoy your garden.

---

### Antiques and Horribles!!

Are your closets bulging and the attic over-flowing? And you're tearing your hair for space and what to do with Junior's (aged 50) things? By all means, call TAbor 3410, and let us help get rid of some of these things. We have an Annual Antiques and Horribles Sale coming in September,

and that is one wonderful way in which to help the other fellow acquire what you have no need for. See the September GREEN THUMB for time, and date. Of course, the place is HORTICULTURE HOUSE, 1355 Bannock! We wish we had enough material so that we would have to hire a larger place to hold this sale. Can you help?



## IRISES IN THE ALLEY

By DOROTHY M. WAGAR

**Y**OUR lot faces the alley too. How does it look from there? Is it a mass of tangled weeds by early summer, that send their children and grandchildren through the back fence to heckle and disturb you? Do those weeds harbor insects that don't get sprayed along with the garden spraying?

We found a solution to this back-of-the-back fence problem while trying to solve another one. Every so often the irises need digging and thinning. With every digging time we found that after replanting all we had room for we had a bushel or two of good rhizomes left over. After a while our friends had all they wanted too.

It seemed a shame to throw away so many potential blooms. We set

the baskets of them in the garage for a while, hoping we could find a home for them. Then we thought of the alley! There was room for a border three rows deep between the fence and the gravelled surface. Out came the weeds once more and in went the irises. That was two years ago and now the irises have taken over. The spring rains give them the water they need for their blooming season. The blooms make a colorful display and turn a trouble spot into a very pleasant one. And after their blooming season is over the straight, strong, deep green foliage makes a trim border for all summer long. They get along without very much watering and the bugs don't seem to find them to their liking. We recommend irises in the alley.

# MEETING THE FLOWER FAMILIES

## BORAGINACEAE: *Borage Family*

By L. J. HOLLAND

**T**HIS family of 85 genera and 1,500 species would probably be more readily recognized by the average gardener if it were called the "Forget-me-not Family", for I'm sure this lovely little flower is better known to more people than any other member of this family. Although closely related to the Waterleaf and Verbena families, it need not bask in their reflected glory, for it has ample beauty among the members of its own set, and too, several genera have found their way into the *Materia Medica*. Let's get on speaking terms with a few.

**MYOSOTIS:** Forget-me-not. While really at home in a moist, shady place, Forget-me-nots may be grown in full sun if they are kept relatively moist. Their low growing habit makes them ideal for the rock-garden or as edging for bulb planting. All species listed in this article are hardy perennials, but they should be renewed every few years, for none of them are long lived plants. Propagation is by division, cuttings or seeds sown in early spring or late summer; seedlings should be kept well shaded and will require protection the first winter.

**M. scorpioides:** The true Forget-me-not of Europe, this species grows close to the ground, and although it may spread some, this is usually an asset, rather than a discredit to the plant. Flowers bright blue, with a yellow "eye". (*P. palustris* of some botanists.) Var. *semperflorens* blooms 'til fall.

**M. sylvatica:** Quite common in cultivation, this is about the tallest of the family, from 1 to 2 feet. Flowers

almost the same as above, but some seedsmen do catalog both white and pink forms.

**M. alpestris:** A dwarf, growing only half a foot high, has varieties that are blue, white or pink. Var. *aurea* has golden yellow foliage.

**HELIOTROPIUM:** Heliotrope. While this is mainly a house-plant or florist plant, it does very well in the garden if treated as an annual or potted and brought inside for the winter. Actually it is a tender perennial. All garden forms are hybrids of either *H. peruvianum*, which is vanilla scented, or *H. corymbosum* that has a Narcissus like fragrance. The color range is from white to deep purple. Of easy culture, they do well in average garden soil. Not to be confused with *Valeriana officinalis*, often called "Garden Heliotrope".

**PULMONARIA:** Lungwort. Perennials from Europe; these plants have large leaves that are often spotted, and are grown more often because of the foliage than the flowers. Although they may be grown in the open, they are at their best in light shade and moist, fairly rich soil. Propagation is usually by division, but they may be grown from seed. Some dealers seem to confuse this genus with *Mertensia*, to which it is closely related.

**P. saccharata** (Bethlehem Sage) has spotted leaves and whitish or reddish flowers.

**P. officinalis** has spotted leaves and red flowers. These two are the most commonly grown species.

**P. montana** has bright green, unspotted leaves; flowers violet.

**MERTENSIA:** Virginia-bluebells:



Chiming bells. Although there are several species, only about four may be considered as garden subjects. Most species prefer a fairly rich soil and semi-shade. Since the foliage disappears entirely after blooming, it is well to plant them among low growing plants or to seed annuals over them.

*M. virginica*, Virginia Bluebell, has bright blue flowers from pink buds. This is the best known species. Some dealers list a pure white form.

*M. ciliata* (2 ft.) and *M. lanceolata* (8 ins.) are both natives of Colorado and both have pink buds and blue flowers. The latter is very tolerant as to soil.

*M. siberica* grows up to five feet; flowers purple, although white varieties have been found.

**LITHOSPERMUM:** Puccoon. A genus of rather hairy plants, mostly perennials, of which three or four are of garden value. All species thrive in ordinary soil.

*L. canescens*, 1 to 2 feet high, has dark yellow flowers.

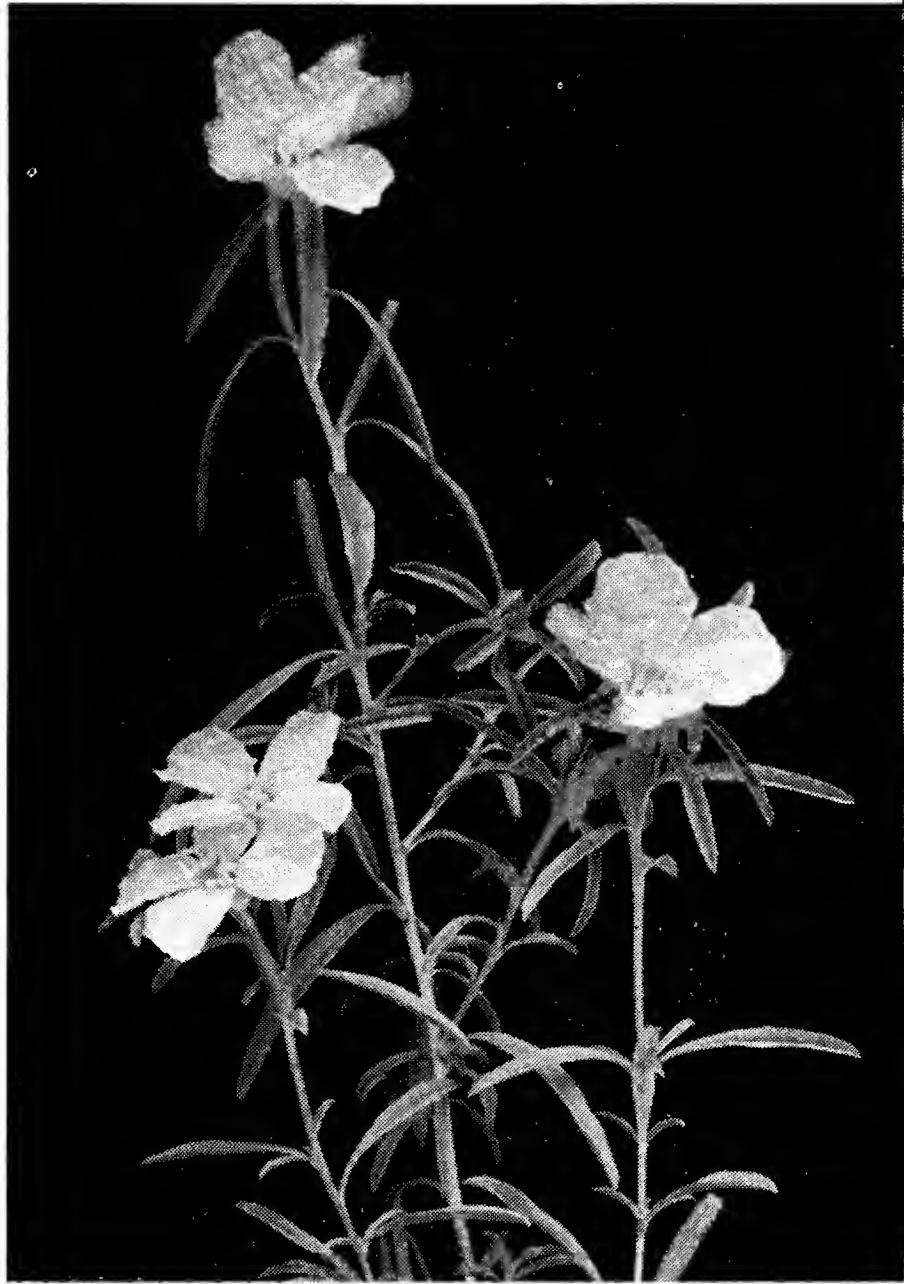
*L. angustifolium* has two sets of flowers, the early ones bright yellow and one inch or more long, the later ones pale and inconspicuous. Eastern Colorado, east and north.

*L. albicans*, related to the preceding, flowers not so long and deep yellow with the edge of the corolla tube crenulated.

*L. purpureo-caeruleum*, a procumbent form from Europe with rich blue flowers.

**CYNOGLOSSUM:** Hounds-tongue. A genus of rather coarse herbs, mostly biennials of little garden value, yet occasionally grown for their blue flowers.

*C. amabile*, often erroneously called Chinese Forget-me-not, sometimes is grown in gardens and is often seen growing as an escape in ditches and along road sides.



*Puccoon, Lithospermum*

### MERTENSIA PLANTED WITH FORSYTHIA

It often becomes a question where to plant the Virginia Bluebell, so that the bare ground it leaves after disappearance is not unsightly. I have grown it under large bushes of Forsythia; both bloom together and the pinky buds and open bluebells of the Mertensia make an attractive picture, when seen through the mass of golden bells of the Forsythia. After flowering the shrub hides the disappearing Mertensia with its heavy sheets of foliage.

H. F.

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**AMIDON'S CASH NURSERY**

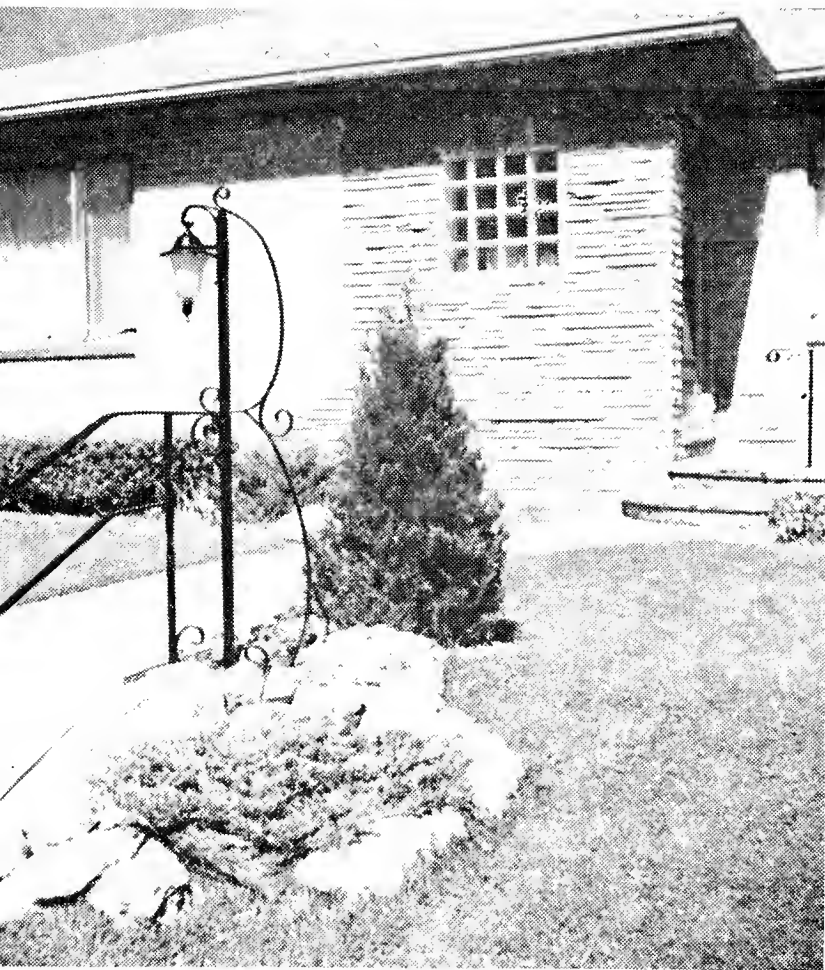
2155 W. 48th Ave.

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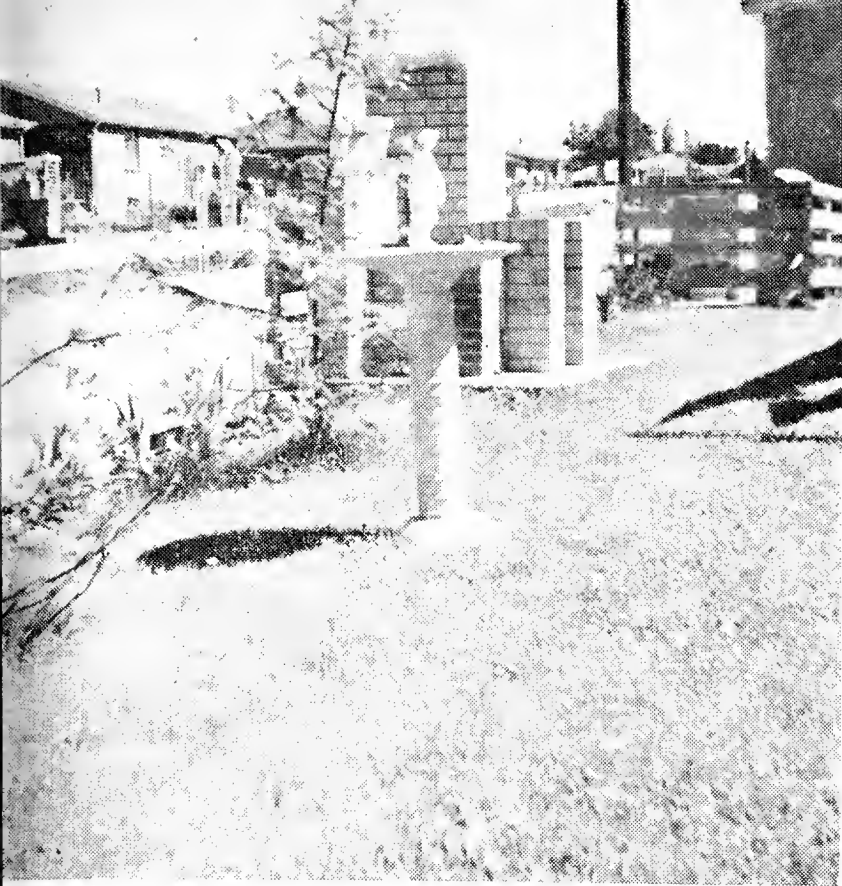
## 32 IDEAS

### *For More Interesting Gardens*

These are pictures snapped by George W. Kelly over the last few years showing features of gardens that might give ideas for someone else to make their gardens more interesting. Many are from the gardens shown in the "Look and Learn" Garden Tours. Look these over and see if a modification of at least one of these ideas might be made to add interest to YOUR garden.







*Upper left opposite page, Interesting approach to home of Mr. and Mrs. Louis Binderup, 3040 Raleigh St.*

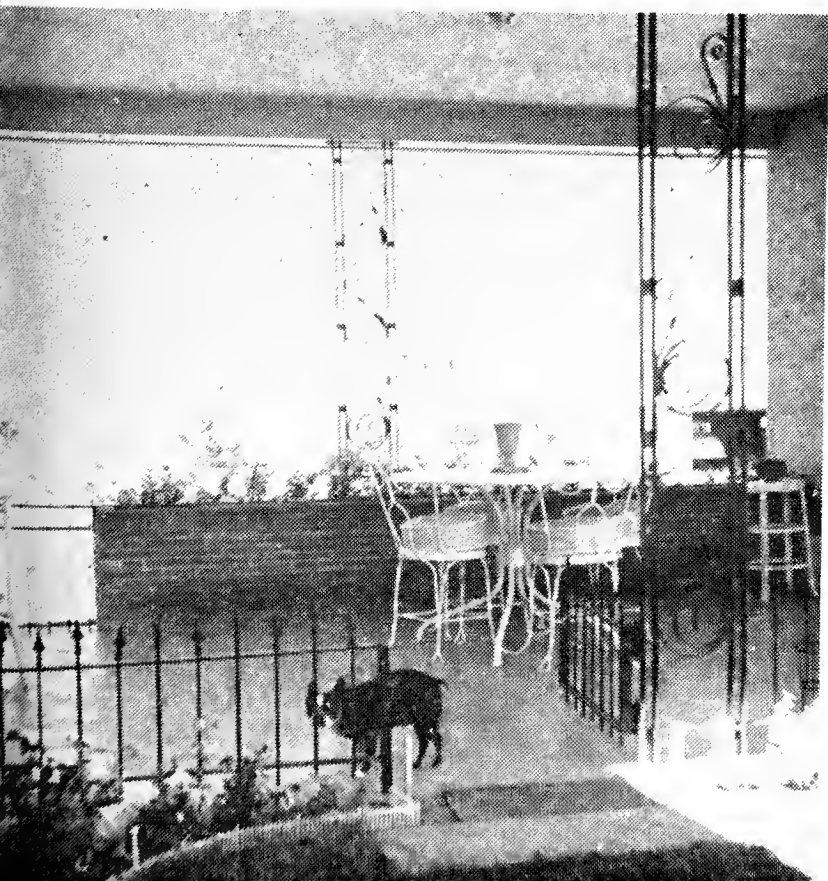
*Upper right, Garden of Robert E. Ewalt, 2354 Elm St.*

*Lower left, Cool nook in garden of Mrs. Christine Hutchinson, 169 Corona St.*

*Lower right, also, scene above and below from the garden of Mrs. Gerald D. Robinson, 600 S. Alcott St.*



*Pergola in the garden of Mr. and Mrs. A. W. Skuderna, 2350 Leyden St.*



*Scene from the patio of the John Waugh home at 226 Clayton St.*





*Above, Clematis on the fence of Mrs. L. V. Woods, 901 S. Elipse Way.*



*Upper right, Sculpture in the garden of Lawrence G. Phipps.*

*Lower right, ornamental fountain and strawberry jar in the garden of Mrs. John G. Kerr, 1900 E. 7th Ave.*

*Below, Interesting shady nook in the Garden of David G. Gordon, 768 Detroit St.*







*Above, Circular sunken garden at the home of Mr. and Mrs. William B. Lucking, 835 W. Quincy, Englewood.*

*Upper left, Pool in the garden of Mrs. Sara Flynn, 2338 Leyden St.*



*Lower left, Pixieland in the David G. Gordon garden.*

*Below, Fountain in the garden of R. D. W. Clapp, 1700 N. Cascade, Colorado Springs.*







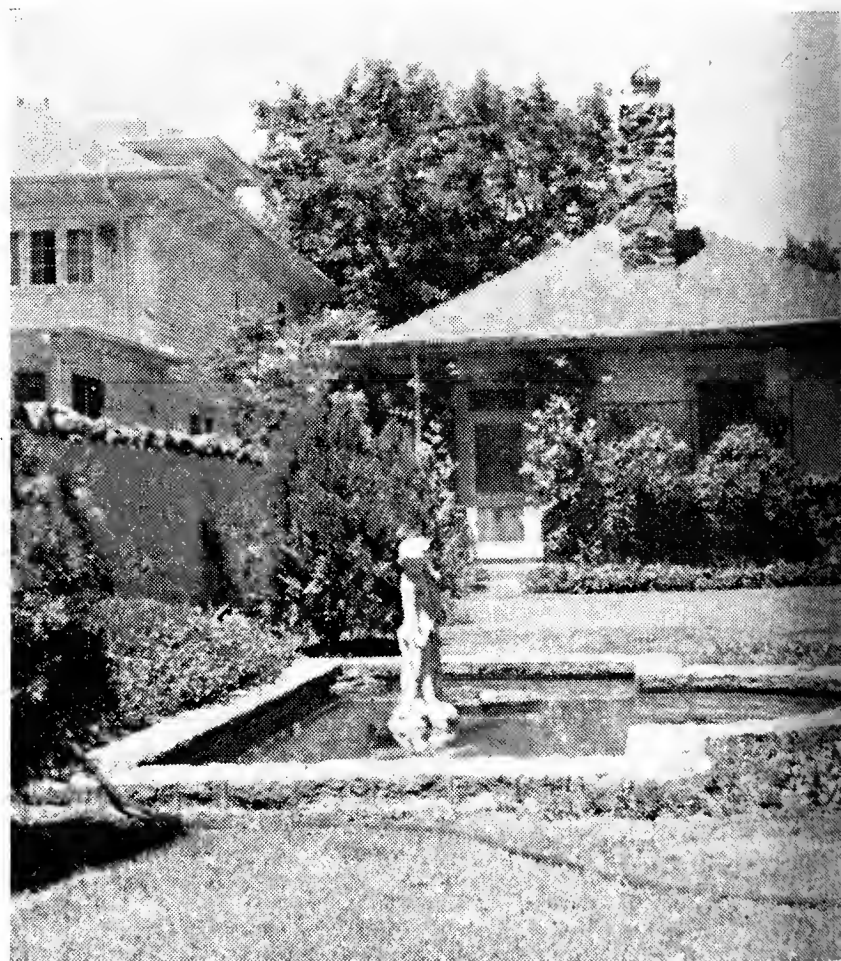
*Above, Patio and fireplace at the home of the Frank Richards, Ft. Collins, Colo.*



*Upper right, Fireplace in the garden of Mr. and Mrs. Frank Harris, 2256 Franklin St.*

*Lower right, pool in the garden of Mrs. E. W. Hughes, 1225 Wood, Colorado Springs.*

*Below, Naturalistic pool in the former garden of Mrs. Henry Brooks, 348 Lafayette.*







*Above, Simple chain fence marking boundary line of the side yard at the home of Mr. and Mrs. Louis Binderup.*

*Upper left, Dry rock walls creating terraces from a steep bank at Glen Arbor near Idaho Springs.*

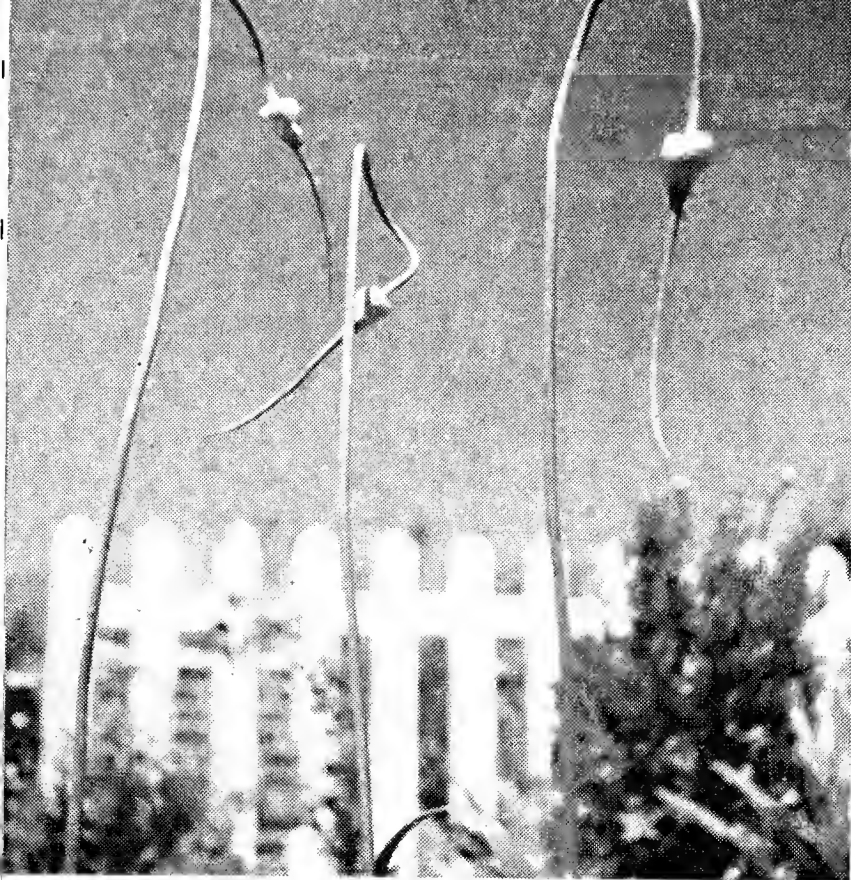


*Lower left, Simple fence marking property line in front of Mr. and Mrs. Frank Rhodes, 1720 Olive St.*

*Below, Sculptured wide hedge screening window well at home of Mr. and Mrs. Louis Binderup.*







*Above, Garlic buttons in garden of Mrs. Maurine Bush, 779 Kearney St.*

*Upper right, Urn and formally clipped trees as seen from the front porch of the Frank Harris home, 2256 Franklin St.*

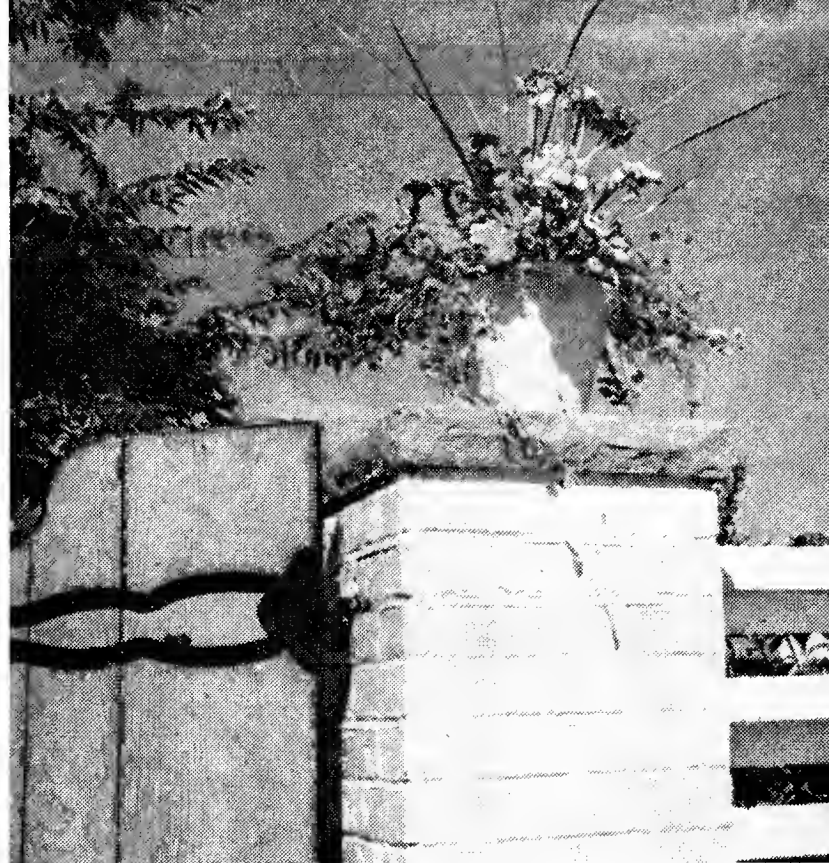


*Lower right, Compost pits and flowers in the garden of Dr. and Mrs. Jan Schoo, 2650 Dexter.*

*Below, Hail screen over grape vines in Martin Keul's garden.*







*Above, Interesting entrance to the garden of P. J. Ferretti, 2025 Raleigh St.*

*Upper left, Boston ivy making an artistic pattern on the wall of the home of Mr. and Mrs. Burnham Hoyt, 3130 E. Exposition Ave.*



*Lower left, Martin Keul holds up his terraces with plantings of sempervivum (hen and chickens).*

*Below, Gary Cook and friends relaxing in shady nook at Horticulture House.*



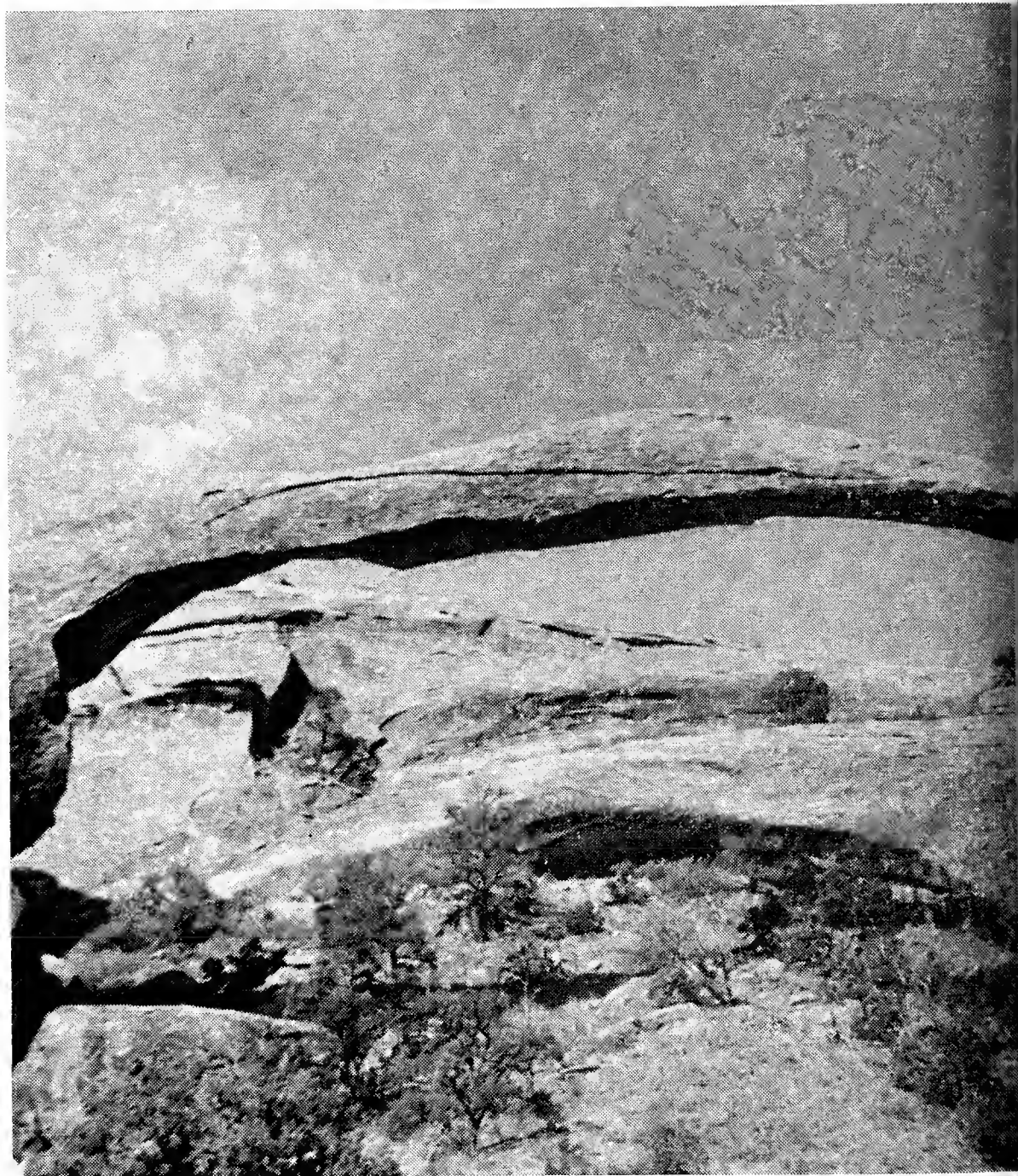


## NATURE'S ARCHES AND BRIDGES

GEORGE W. KELLY

SINCE men have put down on stone, parchment or paper a record of their thoughts and doings there have been mention of their going to Nature for their inspiration; and Nature has been found by them

In these places one may find peace and at the same time the evidence of great strife—all the extremes of Nature—wind, rain, heat, drouth and cold. Possibly one great good done humans is to make them realize their



*Landscape Arch in Arches National Monument*

in its most primitive and unspoiled state in the mountains, the desert and the sea. In Colorado and the adjoining states we have exceptional opportunity to find this peace and inspiration in both mountain and desert, so we may say that we have at hand two-thirds of the available sources.

insignificance in the whole plan of nature and at the same time to realize their strength when they are properly prepared to cope with these natural wild elements. No one can adequately explain to another why they climb a high mountain, sail a wild sea or endure the apparent hardships of the



barren desert—either they know by instinct or they can not be told. To combat all these difficulties and come out successful gives one a confidence and feeling of achievement that can be gotten in no other way.

†The southeast corner of Utah, south of Green River and west of Moab and Blanding contains the large-



Utah.

*Natural weatherworn Arches in the Monument Valley.*

*Upper right, Skylight Arch.*

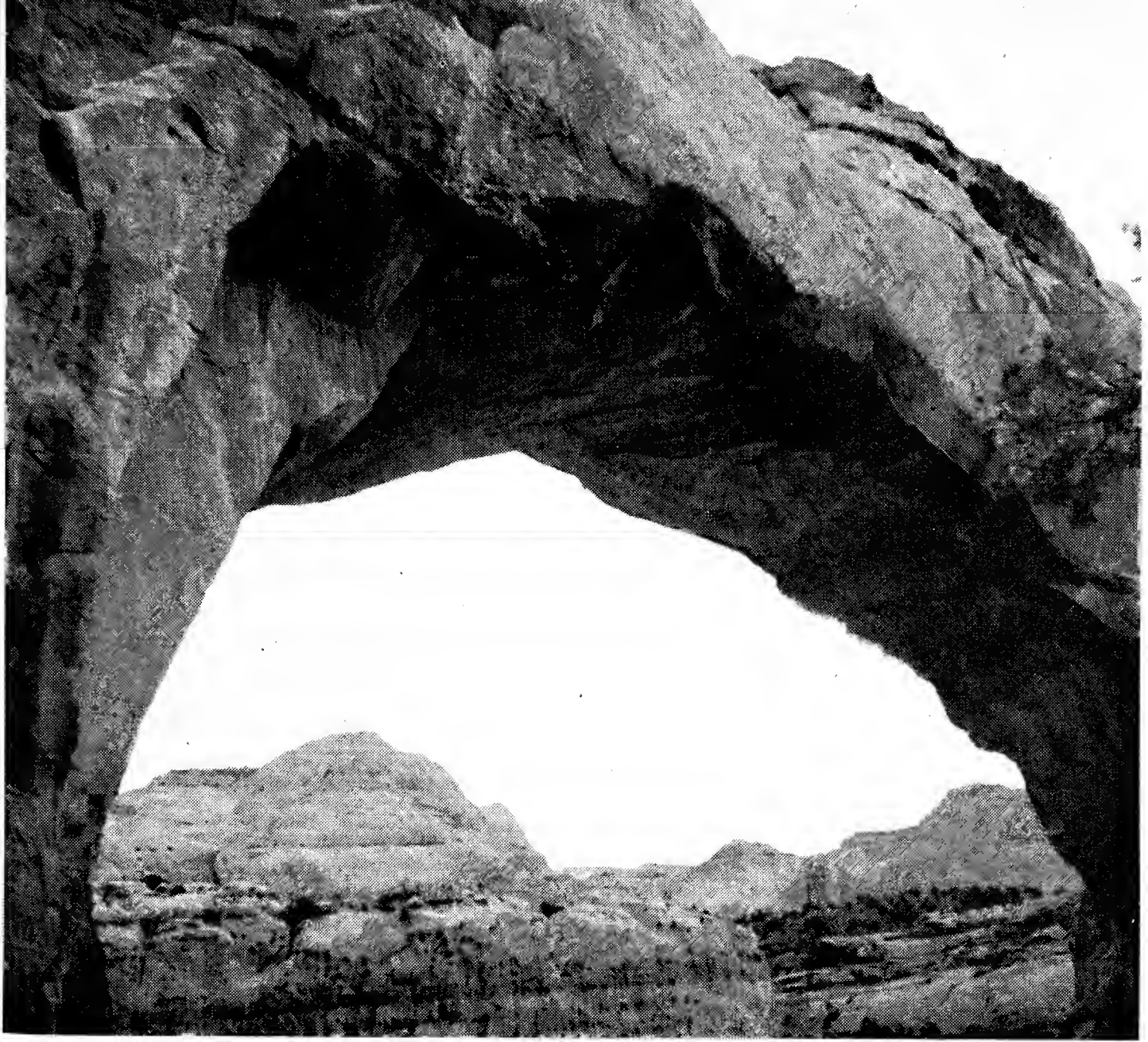
*Middle, Eye Arch.*

*Lower, Ear Arch.*









*Above, Hickman Bridge in Capitol Reef Monument.*

*Opposite page, Upper, Skyline Arch; Below, Double Arch, in Arches National Monument.*

est area of undeveloped, unfenced country still left in the United States. Here are desert, and mountains, fantastically carved canyons and immense ridges and castles of eroded rock. Especially interesting are the many examples of Nature's sculpturing in the form of arches (above the common level) and bridges (below the level). These have been formed largely by the weathering out of softer sections of the sandstone (usually red but sometimes white) leaving arches and bridges of the harder rock intact. The Arches National Monument near Moab, the Natural Bridges National Monument between Hanksville and Blanding and Monument Valley near the Arizona line have many examples of wonderful and beautiful formations.

This country is best seen in May

or October for then the climate is most likely to be temperate and extremes of cold or heat avoided. At that time also there are more wildflowers in bloom and there is less likelihood of storms. As this is a country of few modern conveniences everyone attempting to see it should take precautions to avoid discomfort. Extra gas, water and food should always be carried for at any time a stream which the road normally crosses may decide to go on a rampage and cross the road, washing out sections and marooning a traveller for days. There must be provisions for sleeping out or in the cars to really see this country.

The three principal bridges that can be seen at the Natural Bridges Monument are the Kachina, Owachomo and Sipapu. These are spec-



*Kachina Bridge in the Natural Bridges Monument, Utah.*

tacular formations and the setting in a canyon long used by the ancient Cliff Dwellers adds to their interest. Some of the prominent arches in the Arches Monument are the Delicate Arch, Landscape Bridge and Skyline Arch with many other of lesser size and note.

Monument Valley is chiefly noted for its castles and spires standing out against the sky, but among these are many arches and bridges. The Eye, the Ear, the Clown's Mouth and the Skylight Cave are names that give an idea of the variety to be found in this area if one cares to hunt.

Much of this country is still practically unexplored and many more interesting formations may be found later as roads become more passable and more facilities are provided for visitors.

## **Sierra Club on Dinosaur**

*From Planning and Civic Comment,  
June, 1952*

In May, 1952, in the Sierra Club Bulletin, the Dinosaur Story is told, with articles by General Grant and J. W. Penfold and pictures by Philip Hyde and Martin Litton. The conclusions reached are:

1. Echo Park and Split Mountain dams are not necessary for successful and economic development of the Upper Colorado Basin, or for compliance with the Interstate Compact or to furnish the proposed diversion to the Utah Basin,
2. Substitutes will furnish more water storage and power at less cost,
3. There is a moral obligation to preserve the Monument undamaged,
4. Recreation facilities may be developed around substitute sites,
5. Reductions of national parks

*Continued on Page 23.*



# BETTER GARDENS WITH LESS WATER

By GEORGE W. KELLY

**S**UPPLEMENTAL water brought in from our mountains is the only thing that makes it possible to develop and enlarge such communities as that around Denver. We have been fortunate, so far, in being able to secure an adequate supply of good water for domestic use and the watering of lawns and trees; but if the present trend of growth continues we will all have to learn how to make better use of the available water.

Actually many of our gardens, and most of our lawns, would be better if less water were used, and that smaller amount applied more intelligently. We might well adopt the garden slogan, "water more thoroughly and less often". This practice would also save much valuable time. The "after supper" sprinkling habit is most often wasteful of both time and water. Watering with fine spray in the middle of the day may add slightly to the humidity in the air but do the soil comparatively little good.

Each gardener should experiment to see how much water it takes to keep the soil around his plants properly moist. Any more or less than this proper amount is not good. Sandy soil will generally require more frequent watering than heavy clay soil, sunny spots more than shady places, steep slopes more than level areas, deep-rooted trees more than shallow-rooted grass and it will take more water in July to get the same degree of moisture in the soil than in April. Much heat damage to lawns in summer may be avoided by watering **ONLY** when needed early in the season so that the roots are forced to go deep for their food and water.

Three or four thorough waterings a year which really soak down sev-

eral feet is better for deep rooted trees than a sprinkling twice a week, and most lawns would be better off if they were trained to expect water not oftener than once a week.

While water and time can usually be saved by less frequent and more thorough waterings, a great deal of water may be wasted when the other extreme is practiced. After a soil is soaked to a sufficient depth to accommodate the plants that are growing there, any more applied is not only wasted but may damage the garden. The practice of leaving a small sprinkler running day and night is bad.

Some lawns may require running water on them for half an hour while others may require a couple of hours to get the same degree of saturation. It may take several days with a soil soaker to get the moisture down where it will do a large tree much good.

Much water is wasted because of inadequate equipment. Use sprinklers which put the water where you want it and no where else, and in general, types which throw large drops of water over a longer distance, but slowly, such as are used by most of the golf clubs.

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## Sierra Club on Dinosaur

Continued from Page 22.

and monuments are not in the public interest,

6. Dams in a Monument are bad precedents,

7. The injury would be to the whole country.

There are no valid reasons for these dams.

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Ed. Note: The Park Service has recently improved the road to Pat's Hole and made a new road and trail to Harper's Corner so that more people may now enjoy these spectacular features via ordinary cars.

## WE SEE THE SEQUOIAS

By MRS. FRANK MCCLISTER  
*President, Garden Club of Denver*

WE HAD had a glamorous time, seeing the Grand Canyon, Pasadena and Santa Barbara, and now it was time for those of us, who had chosen to go to the Redwoods and San Francisco, to board the private train again and be taken to Oakland Mole. Arriving the morning of April 4th, we were transferred to busses, and with Mrs. Duncan McDuffie, as our hostess and guide, we started on our two-hundred mile journey to Benbow, in the heart of the Redwood country.

We went through Santa Rosa, where Luther Burbank grew twenty-two kinds of apples on one tree; had lunch at the Green Mill Inn, and arrived at the village of Garberille at the confluence of the South and East forks of the Eel River in the afternoon. We had come to see the oldest living wonder of the world, and no words, no writing, no pictures can describe the beauty of the Redwoods. Not until you have stood under them, can you even imagine their enormous size; their majesty, and their perfection—it was overwhelming—and then in the next breath to see the devastation of such ancient trees, for coming from the forests, one lumber train after another approached us, loaded with huge redwood logs or cut lumber.

It doesn't seem possible that just one hundred years ago, hunters and gold seekers discovered these unbelievable trees, and, knowing that the world would jeer at such a report, cut down the biggest tree that they could find—a 22-day job for five fallers—skinned it very carefully, marked it for life-like re-assembly and these sections of bark, one foot thick,

were shipped to New York and London to silence the skeptics.

People came from all over the world to see them and by 1870, most of the big trees had been located, though one small group of giant Sequoia was reported as late as 1933. Dr. Chaney, botanist of the University of California says—"The Big Trees have spread all over the world to escape climatic changes; and the following four main branches of the Redwood species have moved in twenty-five million years, from China to the Atlantic Seaboard—The Coast Redwood has flourished in California for several million years; the Dawn Redwood in Central China where it was only discovered in 1944; the Swamp Cypress from the Carolinas to Mexico and the Chinese Water Pine on the Southeast China Coast." China is the mother of gardens—it has the richest temperate flora in the world.

The presence of these huge trees in Siberia, Manchuria, Japan, Greenland and Iceland has been established by the discovery of forests of fossil leaves, cones and trunks embedded and preserved in rocks and under volcanic ash. The most spectacular of them is the Petrified Forest in Sonoma County, California.

It was the peril to the beautiful Calaveras grove of nine hundred and seventy-five giant Sequoias that first aroused the nation to the defense of these Sequoia gigantea trees. It also led to the forming of Save-the-Redwoods League, of which Mr. McDuffie was president for many years, and of the National Geographic Society, raising one hundred thousand dollars for the purchase of these northern groves.



The name Sequoia was given them to honor Chief Sequoyah, the half-breed Cherokee Indian, who devised an alphabet of eighty-six characters for his tribe's speech sounds.

There are two Sequoias—in both, the heart wood is red—the Sequoia sempervirens or Coast Redwood, the glory of the California Redwood Highway. It towers higher and has a more graceful and symmetrical look, a broad base like a light house and grows only at low altitudes—5 to 2,000 feet and only on the coast ranges.

The Big Trees, Sequoia gigantea, grow older, more massive and attain greater girth. They grow only in the Sierra Nevadas and at altitudes ranging from 4,500 to 8,000 feet—straight, like a mighty mast. A single limb on the General Sherman is seven feet in diameter and one hundred fifty feet long. As these trees become one to two hundred years old, they lose their lower branches and start thickening at the trunk. A stripling may add one inch of growth in six years, while an old tree takes forty years to achieve the same growth, depending, of course, on the supply of food and water. When these huge branches wither and perish and plunge to the earth, the forestry men call them "Widow Makers". So, in working among them, the men wear metal hats. The living Big Trees occupy scarcely 15,000 acres, though one million, nine hundred and forty-seven thousand acres of Redwood remain. The largest gigantea—The General Sherman—is three hundred and sixty-four feet high, with its diameter twelve and one-half feet. (Daniels & Fisher's tower is just ten feet taller.) When first found, there were one and a half million acres, but one-half of the original stand had been cut before the Redwood League was founded.

When we know that even of ordinary lumber, the United States has only 8% of the forest acreage of the world, but produces 44% of the world's lumber, 56% of the world's plywood and 43% of the world's pulp, you know that our supply cannot last; for not until Theodore Roosevelt became President, were our forest preserves even started. The United States' consumption—should I say waste?—is three hundred and eighty pounds of lumber per person per year, and the world's thirty-one pounds.

Fortunately, the wood of the Big Trees is not good construction wood. Its limitation starts with felling. It is shattered by its great weight—40 to 50 percent is wasted—and the big chunks are a major engineering problem.

On the other hand, the Redwoods make excellent lumber and there is more and more demand for it. Both trees contain more water by weight than wood. A tree two hundred feet high holds forty-seven hundred gallons of water. Only 44% of the lumber of the 461 million acres of commercial forest land in this country is controlled by Federal, State or County, so the greatest danger of waste is in acreages privately owned. Some conservation and replanting and tree farms are helping, but not nearly enough.

Dr. Henry Osborn says of the Big Trees—"I would consider the destruction of these trees one of the greatest calamities in the whole history of American civilization." Wouldn't it be fine if next year, and the year after, and in 1955, the Founder's Fund and Funds from all the 146 individual Garden Clubs of America, could be given to save even one more of these groves from the axe? The South Calaveras Grove and

## LOOK AND LEARN GARDEN VISITS

By VAHNA BROMAN

**T**HE 1952 Look and Learn Garden Visits are almost over. With this final tour they will be just a memory. We must look hard and learn much so that we too may furnish Denver with bright spots of beauty in the coming years.

The Frazer Arnolds invite you to visit their garden at 7035 E. Seventh Ave. You will be impressed with the lushness of what Mr. Arnold calls a "bosky" garden. Tucked carefully in a white brick wall at the back of this home lies this somewhat formally planned, informal garden. Mrs. Arnold likes to call it a lazy man's garden. Perhaps you will want to be lazy in it too. The gravel paths seem to divide it into two tiny gardens, each with a certain charm of its own. You'll want to sit and enjoy the narrow pool on one side that Mr. Arnold likes to claim for himself. He likes it best because, as he says, he doesn't have to mow it, he doesn't have to fertilize it, and it needs no watering. If you want a cozy, secluded garden, you can learn much from this beauty spot of Denver.

The Galen Broyles home at 754 Olive has seen many changes in the six years they have lived here. They took out a number of large trees that were no longer needed here and planted the huge hedge that protects the west side of the large garden. The large evergreens are also part of their planting and planning. Mrs. Broyles says that this garden is not complete, but is in the midst of a ten year planning period. You will be impressed by many things in this garden. The tomato plants in pots at each side of the back porch, the roses planted near the light colored wall that is covered with greenery to protect the flowers from too much reflected heat,

and the completeness of a yet uncompleted garden. It will be in full color with dahlias, chrysanthemums, tuberous begonias and other late summer flowers. The rock garden, placed carefully near the center, is most effective. Gardens like this are what many of us dream about.

A place for children to play and a spot for the family and friends to enjoy in peaceful quiet have both been provided for in the garden at the Robert Hart home at 1200 S. Gilpin. The play yard and service yard have been separated by a redwood fence which protects the built up garden. This fence, built by the Hart's, completely closes this garden. Late summer flowers of all kinds will bid you welcome here, and you can rest on the covered patio and enjoy them and the oak tree with its welcoming shade.

At the Dr. A. A. Hermann home at 131 S. Birch St. you can see what miracles can come from a sand hill of only two years ago. Dr. Hermann gets up at 4:30 in the morning to work in this garden, but he hastens to add that Mrs. Hermann spends eight hours a day in it too, and she deserves much of the credit for its beauty. It reflects the loving care of united hands working together for all that's beautiful. Dr. Hermann says that every plant likes its own environment, and if you give it what it likes it will smile on you. The smiles are everywhere in this garden. The flowers are happy here and they seem eager to grow just a little better because of their happiness. I can't begin to introduce you to the entire family in this garden. You will have to come and meet them yourselves. There's the wishing well that Mrs. Hermann built, with a little house on top of a rock pile by a pool, with

Johnny-jump-ups everywhere. There's another pool not far away filled with water lilies. Chrysanthemums by the score, Gladiolas of every color, and some five hundred rose bushes of every kind are only a few of the hundreds of flowers. Dr. Hermann and his wife built the fence around the garden, which meant many hours of hard work. You'll find a vegetable garden here too, with every kind of vegetable you can think of, including peanuts. Raspberries and grapes grow at the back of the garden. This garden is built on different levels, sloping down toward the west, in order that nothing will obstruct the perfect view of the mountain range from the patio. Dr. Hermann supplies the flowers for the pulpit of the North Presbyterian Church from this garden. The young people from this church also pick flowers here for the Good Samaritan and Denver General Hospitals. Plan to spend a considerable amount of time here, as there is much to see and many wonders to enjoy. The Hermanns are happy to welcome you here to visit their friends in this garden of love.

Last month we visited the home of the A. W. Skudernas. This month we shall see another Skuderna home in its beginning. Mr. and Mrs. John Skuderna are building beauty at their home at 1221 Forest. They have a greenhouse at the back of the house which is the beginning of many of their flowers that later find shelter in this garden. This garden is in its third year, and has come far in these three years. Phlox, Gladiolas and Chrysanthemums will be only a few of the colorful flowers you will see here. The Skudernas have placed corrugated iron trim around part of the flower garden to keep the grass from creeping in. With this garden in the back, and the Tuberous Begonias, Stocks and Ivy growing

around the front and north side of the house, the Skudernas bid you welcome to the new little home and garden they hope you will enjoy with them.

Mr. and Mrs. Paul Timm, at 348 Ogden, have just built a sun room onto their home, which you are sure to be interested in. They can have flowers here all the year around in the planters which are built on the wide brick window ledges. In back is a garden with an irregular pool surrounded by rocks and flowers. This is another shady, peaceful garden that bids you and the birds welcome, and hopes all will enjoy it.

Are you still wondering what is behind that wall at East Sixth Avenue and York? Remember, you planned to visit the garden of the Donald Marshalls at 540 Circle Drive on your first Garden Visit. You will have that opportunity during this last visit, so you might like to again refresh your mind about what to expect in this exciting garden by reading Mr. Pesman's article about it in the January, 1952, issue of the Green Thumb.

These Garden Visits have been fun. We hope all of you have learned much from them and will gain a great deal of inspiration from having visited them this summer.

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### We See the Sequoias

Continued from Page 25.

the Avenue of the Giants are immediately in the path of lumbering operations.

When you realize how many, many centuries it takes to grow these trees, and you know that some were seedlings when Alexander the Great set out to conquer the world, you know that they can never be replaced.

Editor's note: The second part of this article will appear in a later issue of the Green Thumb.





## FOR KIDS OF 8 TO 80

### *A Bug With Friends and Enemies*

**T**HE APHIDS or plant lice are one of the most generally distributed of the pest insects that gardeners must control. They are generally green but may be red or black. They are very adaptable insects, multiplying rapidly when conditions of food and weather are favorable and employing many ingenious methods to survive when conditions are not right.

Some species feed only on certain plants and these plants may be accurately identified by the presence of these species. Others may feed on a number of plants. All eat by inserting their sharp beaks in a plant to

where there is a flow of sap and sucking the sap. A few may do little harm, but they do not long stay "a few" and may completely dry up and kill a host plant.

When food and weather are right most aphids may lay a great number of eggs and these may mature and be prepared to lay eggs themselves within a week or two. At critical times some species may give birth to young, and some of these young may be prefertilized females which may lay dormant until spring and again start the system of egg laying. Sometimes males may be absent for many



generations and at other times they will only live a few days after becoming mature and fertilizing the females. Colonies may go through many generations with no winged forms seen, but let the food become scarce and winged members will appear to fly to other fields.

Aphids are practically helpless when attacked and must depend for their existence on their versatility in hibernating or going to other areas. They have many enemies and also friends. Because of a sweet "honeydew" that most species give off they are protected by ants who use them as "cows" and will keep some species over winter in their nests and in spring plant them on the twigs of their favorite plant.

Lady beetles, Ant lions and other insects depend on the helpless aphid for their food. If it were not for these natural controls one pair of aphids might in a very short time almost cover the earth with their progeny.

As aphids suck their food rather than chew they are immune to sprays of stomach poison, but as they are soft-bodied they are easily killed with the contact sprays that burn their soft bodies. Nicotine sulphate, Pyrethrum,<sup>x</sup> Rotenone and many new chemicals are used to keep aphids under control. Under normal conditions the lady beetles and other predators will keep them from doing any great damage.

## The Denver Orchid Society

Recently, all over the country, a great deal of interest has been shown in home growing of orchids. The interest in Denver has been so great that we now have an orchid society of 32 members who grow orchids all the way from one or two on a window sill to elaborate greenhouses. Our so-

ciety is affiliated with the American Orchid Society and is co-sponsor of the Orchid Digest of the Pacific coast. Mr. Walter Slagle of 60 Dexter is our President and Paul Spencer of 4600 So. Lafayette is vice-president. Mrs. Judith King of 830 W. Quincy is our secretary and treasurer. The meetings are held at 7:30 the 2nd Thursday of every month at the homes of the members.

Dr. and Mrs. James Waring were hosts for the July meeting at their Green Meadows country home. John T. Roberts gave a travel talk showing pictures taken in the orchid countries of Central and South America. The August meeting will be held in the garden at the home of Mr. and Mrs. C. Earl Davis, 2257 So. Fillmore. The program will be the Wm. Kirch movie on Orchid Culture in Hawaii. Anyone who is interested in growing orchids and joining our society should contact Mr. W. F. Clendenen, 711 So. Jackson, Phone PEarl 9684, membership chairman.



## LIBRARY DONORS

June-July, 1952

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Mrs. William Evans, 1310 Bannock St., Denver

# FLOWERS FROM SPRING UNTIL FROST

By MRS. ELIZABETH BAHM

**D**ON'T be like the gal that said "Spring has sprung, grass has riz, wonder where the flowers is." Plant your garden with this in mind, "I want flowers from spring until frost," and you won't have to "wonder where the flowers is"!

Start with the fence—a white lattice fence is lovely with yellow Forsythias against it. With careful planning, spring can come into your garden on wings of yellow, lavender, cream and white, blue and pink. A lovely carpet of yellow, white and lavender Crocus, yellow and white Daffodils, intermingled with the pink and blue lacey Forget-me-not-flowered Anchusa make a delightful pattern in the picture garden. Pink and blue flowered, silvery-foliaged Lungworts, the violet-scented purple-blue Iris reticulata, the blue Grape Hyacinth and the white, pink and blue Scillas welcome spring in their gay colors. Stately blue, pink and white Hyacinths, in clusters spread their sweet fragrance through the garden. A little later, the yellow, white and deep blue of the Dutch Iris, with the help of salmon pink Tulip, Fantasy, planted in bouquets, keep the garden picture a lovely riot of color. Baby-blue flowers of the Jacob's ladder planted in clumps with the pink, plummy, fern-leaf Bleedingheart dance and nod above the blue, pink and white violets, and the red, yellow and blue Primroses. White, pink and rose colored Tulips, planted in curved rows add a rainbow to the picture.

Blue and pink Mertensia sway their dainty bells among the Tulips. Blue, yellow and red Columbines and blue Platycodons, blue and white Campanulas, pink Dianthus and in the background pink and white Peonies lend their touch to the picture.

Blue Flax and yellow Trollius bring a bit of the sky and sunshine into the garden. White and lavender Hosta Lilies not only bring fragrance and grace with their blossoms but the leaves are good for arrangements. Rosy-purple Meadow Rue with its Columbine-like foliage stand gracefully above the mauve colored Spiderwort, Pauline, Pink Painted Daisy and again, the blue Flax. It is desirable to have spike flowers in the garden but up until June, it is rather hard to find a good spike. A little later they come into their own.

White Dragonhead, blue Aster, frikarti and pink Astilbe make a delightful picture from June to September. Blue Veronica and white Delphinium are cool to the eye on a warm day. When fall comes, white Boltonia hovers above pink, blue and lavender Fall Asters like a white frothy cloud, so plant them well back, as the Boltonia is quite tall. The picture gradually loses its brilliant colors with the coming of frost, but with bushes covered with orange and red berries against a white lattice fence, the garden will remain pleasing to the eye for many wintery days.

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 Mrs. P. A. Littell, 3480 Belcaro Lane, Denver  
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 Mrs. George H. Work, 137 Dahlia, Denver  
 Mrs. H. C. Bennett, 2045 Quitman, Denver  
 Mrs. M. G. Hastings, 555 Teller, Lakewood, Colo.  
 Mrs. W. C. Covert, 7655 W. 48th Ave., Wheat Ridge, Colo.  
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 Mrs. Roy M. Mays, 850 So. Columbine, Denver  
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## ROSE NOTES

VELLA HOOD CONRAD

Fred Howard, Helen Traubel, and Vogue. I like the way they perform. Vogue merits a mass planting in my garden next year.

Fred Howard won a cup at our re-

cent show. It is not as much like Peace as pictures lead us to believe. Helen Traubel is a luscious blend—classified as a pink, but has undertones of apricot. Will probably have more color intensity with fall bloom.

Roses should be disbudded at least three weeks before exhibition. No need to do this after their attain much size. Be sure and keep your rose bed moist—but not boggy. And do try to get your spray schedule worked out so that you won't be spraying and dusting one week prior to exhibition. Of course, if my roses needed spraying or dusting badly—I'd do it and forget exhibit.

Roses need to be hardened off before showing. There are many theories regarding this. Some say—refrigerate. I have had better results plunging the cut specimen into a bucket of cold water and placing in the basement overnight. The roses that I pick at 4:00 P. M. seem to hold up best too. One tablespoon of sugar to a quart of water is a good preservative.

If you have an especially nice specimen that you want to keep for a number of days to show—cut it, store in a cellophane bag, without water and place in your hydrator, in refrigerator. Keep temperature at 38 to 40 degrees. Do not place in water before or during storage.

Roses may be somewhat wilted when removed. To facilitate uptake of water, clip stem end off about one-fourth inch and place in water at a temperature of 100 degrees. The flowers in warm water are then placed in a cool place for 6 to 8 hours. A cool temperature reduces water loss, but warm water allows for quicker uptake.

There is much to learn along this line. Do a little experimenting on your own. This is one sure way to learn which roses hold up best.



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## Plan Now for Flowers in the House This Winter

By MRS. ROSE HUGHES

There are a lot of tricks to growing house plants.

A little study of their needs, at this time of the year, will give you the "know how" that will make your house plants this winter a thing of beauty and a joy to care for.

Whether you are interested in one plant or a window full of plants there are books in our library to tell you how to care for them, to obtain the best possible results.

Don't deny yourself the beauty of growing plants this winter, because you feel your home just doesn't have the ideal conditions for their growth. If there is a lack of sunshine or an abundance of it, if your space for plants is limited or you have more

than you know what to do with, if your house is too warm (you're always freezing) or too cool (heat makes you drowsy) remember—there are plants to fit each situation. Plants, like people, have preferences, so let's be glad they do, or some of us wouldn't have any to grow.

Our library hours are the same as those of Horticulture House—from nine to five, Monday through Friday. If you are a member of Colorado Forestry and Horticulture Association, you are privileged to take books from our library for a period of two weeks. We have a very large and complete selection of magazines too, covering all phases of gardening. You may look at these magazines here at Horticulture House.

The wise flower grower looks ahead to tomorrow, so why not get your green thumb ready for the winter season?

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### GREEN THUMB?

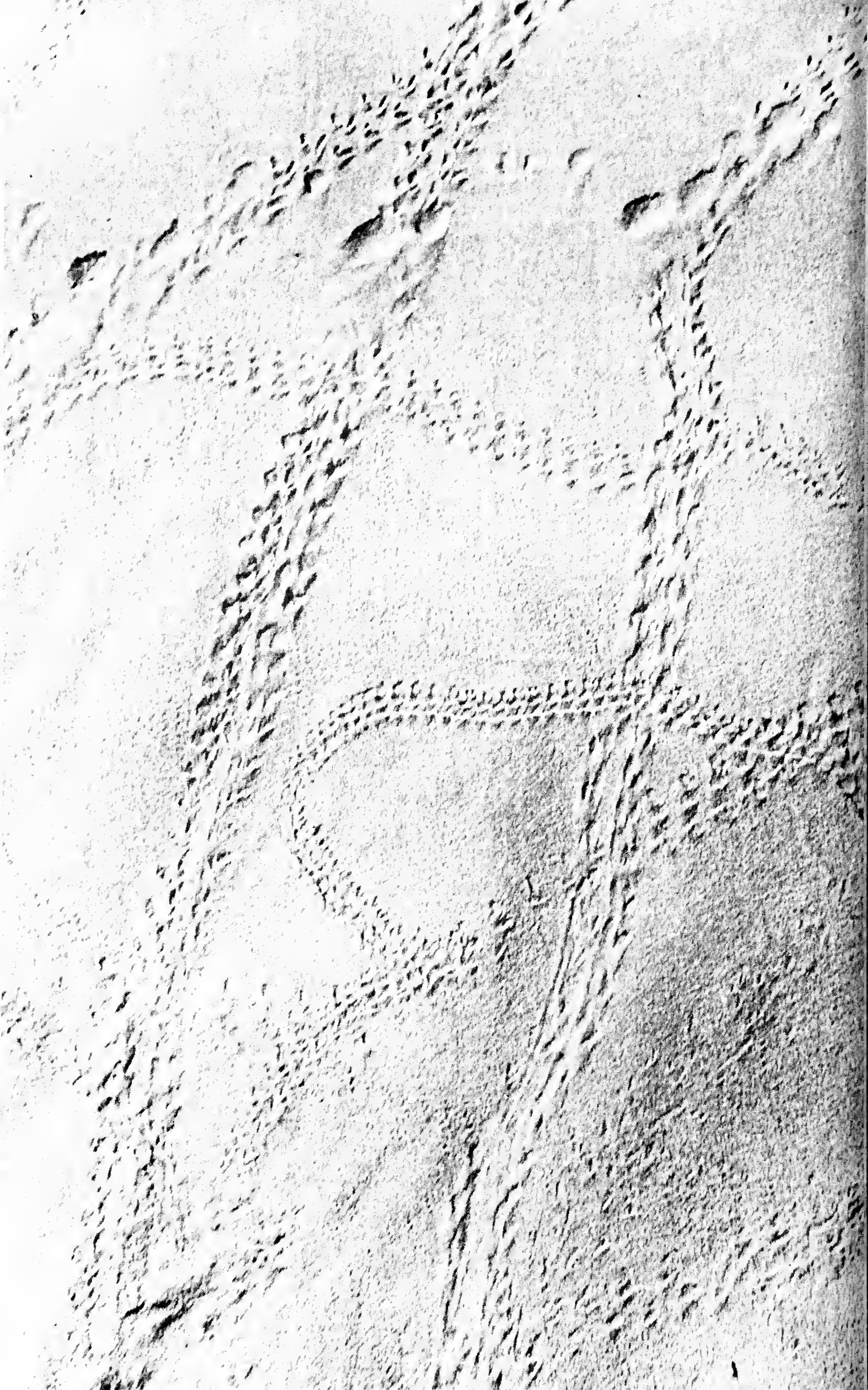
By MRS. DOROTHY RACE, Parker, Colo.

I come in from my garden—  
A pleasant memory lingers;  
But this I've learned—  
With each Green Thumb,  
There must be four brown fingers!

---

*Back Cover—Footprints in the sands of time in Monument Valley.*







September, 1952

25 Cents

# *The Green Thumb*

COLORADO'S GARDEN MAGAZINE



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Colorado Forestry and Horticulture Association

Organized in 1884

*"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."*

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Secretary-Treasurer .....Mildred Cook  
Editor.....George W. Kelly

SEPTEMBER SCHEDULE

Sept. 7, Sun. City trip to see flowers and trees. Meet at north door of South High School at 10 a.m. Study trees and shrubs around South High grounds and in Washington Park. Eat pocket lunch together at fire place in northeast corner park at 1 p.m. Further trip at 2 p.m. if desired. Led by George W. Kelly.

Sept. 14, Sun. Trip to No. fork of Thompson River to ghost town of original Estes Park Village.

Sept. 17, Wed. 8 p. m. at Horticulture House. For all good gardeners, especially the commercial men. Let's go to school too this fall. To start it off the topic will be, "What's New in Insecticides." Experts to lead the discussion. Come and give an account of your successes and failures and learn from others' experiences.

Sept. 21, Sun. Trip up Silver Creek out of Empire.

Sept. 27. Antiques and Horribles Sale. Everyone come.

Sept. 28, Sun.—Trip to Hamlin Gulch and across to Central City.

Oct. 5, Sun.—Exploration of Pinion Grove north of Fort Collins. For more particulars of the outdoor trips call TA 3410 or PE 5565.

It was Doctor Johnson, that man of great wisdom, who advised once—"Get a book about gardening and study it hard, since you will pass your life with birds and flowers."

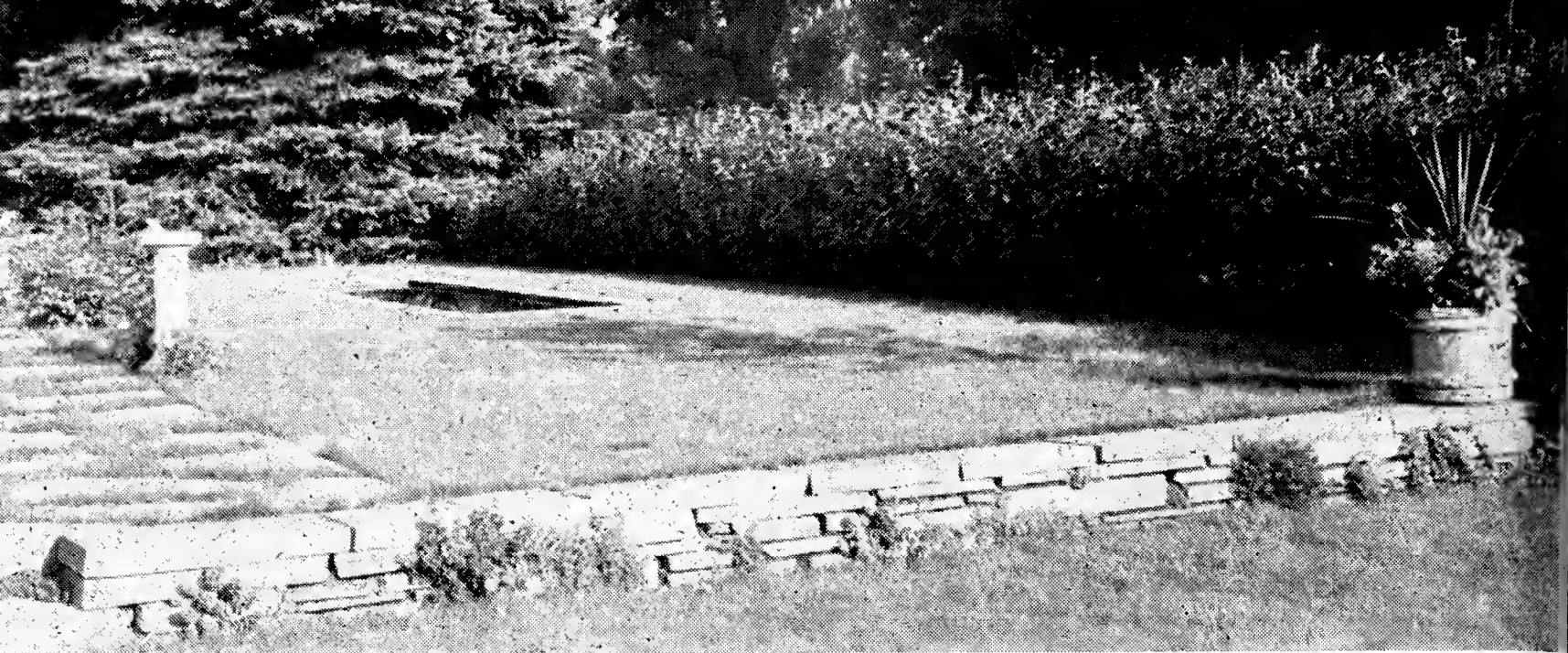
Antiques and Horribles,  
September 27

The Auction of Antiques and Horribles, with its usual good values in bric-a-brac, good fun, and good coffee, will return to the parking area at Horticulture House, Sept. 27 beginning at 1 P.M. Col. John Swingle will preside to give the beautiful gals their share of the bargains. The Campfire Girls will do their usual good deeds for the day.

Since the spring auction was devoted to the sale of plants, the regular fall auction has been changed to take care of the sale of donations of household goods and bric-a-brac. Money derived from this event is used to bolster the funds of the Colorado Forestry and Horticulture Association.

Please call TAbor 3410 for pick-up service on items to be donated for sale at the auction.

The Garden Study Group will hold its next meeting Friday, Sept. 26 at Horticulture House. The talk will be on "The City with Golden Garbage and Why" and "How to Make a Compost." The meeting is from 1 to 3 p.m. with dessert luncheon at 12:30, 25 cents. Guests are welcome. For membership and information call DExter 1249, I. P. Schoo, 2650 Dexter Street.



## GARDEN NOTES FOR SEPTEMBER

SEPTEMBER should be the time to enjoy our gardens. The strenuous work of weeding-mowing-watering-fertilizing should be pretty much at an end now, so we will have time to sit and enjoy the flowers we have planted, the lawns we have made, and the shade that we have created.

September is the time that the kids go back to school, and it is well for us also to begin to study some of the things that we wished, last summer, that we knew as we were working in our garden. Something about the new plants and how to take care of the older plants. Something about how plants grow. Something about the botany of plants. Something about the new fertilizers and new insecticides, and all those mysterious things that go to make up a good garden and a good gardener. Many of the good garden magazines have come and been set aside during the summer. We can look those up and get a lot of information from them. It will help us in our gardens and make it more interesting. We can also find books at Horticulture House, which we may read there, or if they are of general interest, we can get them for our own use later and study them all winter.

We should also have time, in this month, to look around our neighbors gardens. See what interesting things they have done, what interesting plants they have grown; what ideas they have worked out that we can incorporate into our garden plan. These may be changed a little bit and improved to fit our particular conditions. We should have time now to visit with our garden friends and exchange ideas, a job that we haven't had time to do during the summer.

Of course, it's not well to let down entirely in our garden activities. There are things that can be done at this time of the year to save a great deal of work later. The few dandelions that are left over are enough to seed the whole garden. The few aphids that are left on plants are enough to give a start that might cause us a lot of trouble next year. A little later we should be especially observant of our Euonymous, our Dogwood bushes, and our Snowballs. These shrubs are subject to attacks of alternate host aphids, which seriously damage and curl their leaves in the spring, then leave and live on other plants through the summer and come back again in the fall. In the spring, it is almost impossible to control these insects because they roll themselves up so tightly in the leaves, as soon as new growth appears. In the fall they are in the open and can be easily killed, so that they will not build up a population to ruin the plant next spring. The contact spray, Black Leaf 40, Rotenone Pyrethrum, or others will control these, of course.



If it's necessary, the Dutch bulbs can be moved now. They are the ones that are planted in the fall and bloom in the spring; such as, tulips, hyacinths, various forms of narcissus, crocus, scillas, and such. They should be entirely dormant now and can be taken up, divided if it is necessary and set in their new locations. It will be well to plant most of them a little deeper than they were before, and in a place that is not too hot and sunny. If the tulips have split up, it will be best to throw them away and buy new ones.

When the first frost hits, it is time to take up our tender bulbs; those like gladiolus, dahlias, cannas, tigridias, tuberous begonias, Peruvian lilies, Dutch iris, and such. Each one of these bulbs or tubers requires a little bit different care. Some of them like the gladiolus are very easy to keep over the winter when they are once thoroughly dried out. Others, like the dahlias, are quite fussy as to the amount of heat or moisture that they get over winter, and must be given very good care.

Lawns, we will always have with us, and as long as they are growing, they'll need care. We will learn to water them whenever they need it, but at this time of year they should not be watered only as they really do need it, then THOROUGHLY. Let them go until they show signs of beginning to be a little dry again, before we give them more water. After the crab grass is dead is a good time to put on the crab grass seed killer to prevent this weed coming up another year. Some of the more difficult weeds will probably not be so easily controlled with the weed killers at this time, when they are not growing so vigorously. The few that might give seed for next year may be dug by hand if necessary, and save a great deal of trouble next year. It is especially important, now, to mow the lawn rather high and leave the clippings fall, so there will be a good mulch on the surface to help the lawn through the winter with the least amount of damage.

At this time of let-down in our garden activities, it is especially important that we watch that one feature of a good garden—Neatness. It doesn't take much time to keep the dead stalks of the earlier blooming perennials cut off, and to keep the rubbish that blows in from the outside picked up. Keep the edges of the lawn and the flower beds neatly trimmed, and keep the hedges, also, closely trimmed.

Plan now for your next year's garden while this season's successes and failures are fresh in your mind. Put down on paper these ideas for improving your garden, for by the next spring you will have forgotten many of the things that are now fresh in your mind. Over the winter when it is snowing outside, you can look over seed catalogs, pick out the new plants you want, you can draw plans for little interesting details which you want to add to your garden next year.

Some trimming can be done at this time, if it is necessary. The lippy stems of the shrubs that are interfering with the walks, the dead limbs in the trees, the vines which have grown too rapidly, may be cut back now. Of course, it is much better to do the bulk of trimming on shrubs immediately after they are through blooming, so as to allow a full year's time for the new growth buds to form, and not interfering any more than possible with the blooming next year. There may be little routine spraying to be done at this time. It is well to check weekly, all through this month, and if there are any insects or diseases which need control, it is better to control them now than to let them get out of bounds, and leave spores or eggs to re-infect your plants next spring.

# GETTING THE BEST OF A LANDSCAPE ARCHITECT

By ONE OF THEM

THIS article should be strictly confidential, really: it tells you the "inside dope" that is usually kept as a tip from "man-to-man." But since everything nowadays gets into print some day anyway, The Green Thumb might as well have the first scoop. So here goes.

A clever little pamphlet tells "How to Live Happily With Your Broker." It happens to fit beautifully, and can be adapted as follows:

1. Will a landscape architect want the job if only a small place is concerned? Ans.: Will he! Just try him. You can expect as courteous and interested a reception as though you owned a section of land.

2. Will I be high-pressured? Ans.: The landscape architect's job is to help you, not to sell you a lot of nursery stock.

3. Are women clients welcome? Ans.: And how!

4. Will a landscape architect try to make me landscape more than I can afford? Ans.: He would be a fool not to help you act in your own interest, which is his interest too.

5. Will he be "nosey" about my affairs? Ans.: Take him into your confidence. Don't be cagey about your \$50, \$100, or \$700 you want to put into your home-grounds. He will try to get you the best value for that amount. And his advice is very apt to save you a nice bit of money, you might have spent ill-advisedly.

Now let us depart from the comparison with a broker. We might have made a parallel with an attorney, a physician—any other professional man whose first duty toward his client is to serve the interest of the client—nobody else's.

Just what can a landscape architect do for you? It all depends on what you know about his type of work.

If you think of him as a person who can only help you to decide where to plant your sweet peas and petunias, or what kind of spirea to buy at the cheapest rate—his help to you will be quite limited.

If, on the other hand, you realize that his job is "land-planning," no matter how big or how small a piece of "land" is involved, then his usefulness multiplies. With his background and experience he has learned how to "fit land for human use and enjoyment, in such a way as to combine the greatest beauty with the greatest usefulness."

Here are some examples. Mrs. Brown has a garden that does not please her, and does not fit her needs. She has some ideas about how to change it, but feels uncertain about it. She calls a landscape architect on consultation at so much per hour, lays the problem before him (or her), gets his experience, and some ideas she had not thought of, talks things over frankly, and then goes ahead with a definite program. The small sum invested in advice has saved perhaps a large sum in experimental changes.

Mr. and Mrs. Green are ready to build a home. They have two or three plots in mind; they know the sort of home they want and need. They take a landscape architect in tow, show him the sites, explain their proposed plans, their mode of life; together they explore the possibilities of each site, tentative location of the house, even the elevation of the ground floor. Two or three hours, paid for at an hourly rate, leaves both



*Garden of Arthur Rippey, photo by M. Walter Pesman.*

parties free to make later arrangements if and when the house is being built. (Advice: don't wait to get a landscape architect until the grading is done, and the walks in; he is apt to advise you to undo the grading and rip up some of the walks already paid for.)

Mr. Black has a home site that lacks seclusion, character, "hominess," shade. His landscape architect designs his fences, both for screening and for enclosure, locates and plans a "patio," a wall-fountain, and advises on the added nursery-stock to be planted next spring.

Mr. Purple's problem is the more stereotyped one of a definite garden plan, at an agreed sum, depending on number of lots, type of homegrounds, etc. It consists of a tentative plan which is discussed with the whole Purple family, a General Layout, and finally a Planting Plan and Planting List, with or without planting specifications. It may, or may not include supervision of construction. Essentially the work of a professional landscape architect differs from that of a nurseryman or landscape contractor who may give a lump sum bid for a more or less carefully outlined "gar-

den layout." There is no "hidden profit" concealed in his work, as there is in such a lump sum construction.

We will omit from this article the long list of "unusual" or semi-public and public projects, such as subdivisions, schoolgrounds, hospital grounds, cemeteries, parks, recreational areas, and what-not.

A fairly new development, however, should be mentioned. More and more there is cooperative consultation. A close-knit community decides to have a Master Plan worked out for the entire neighborhood, a garden club arranges for a group consultation, a family group finds that a landscape architect can be helpful in advising on "good buys."

A final word for Mr. or Mrs. Blue, Yellow and Carmine, has to do with the unusual situation. Again and again we have found that it is always the difficult circumstances that result in the most striking home grounds. Think of the rock outcrops in Boulder, the two-level gardens, the irregular site plot, the low spot that developed into a pool, the shady nook, "that would not grow grass," and became a cozy hide-out. And LOTS MORE. MWP.



# WHEN IS A "CACTUS" NOT A CACTUS?

ELIZABETH NIXON ECKSTEIN

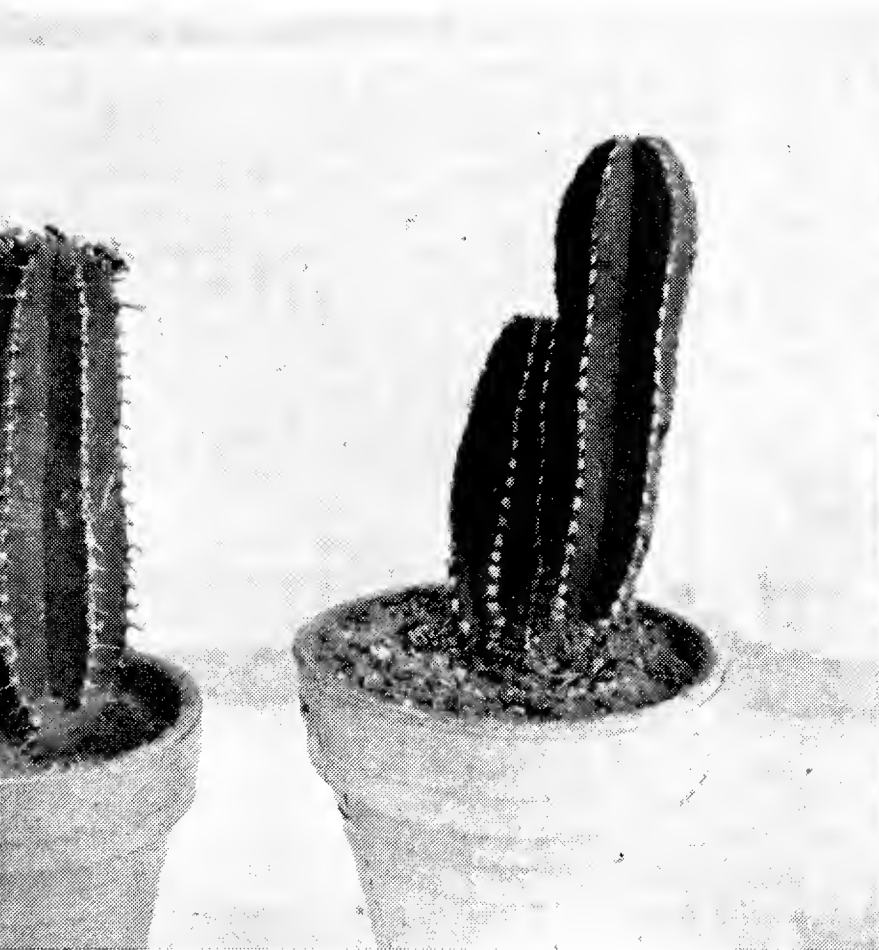
**W**HEN is a "cactus" NOT a cactus? Sometimes when it looks most like one.

You say, "A cactus is prickly." So is a rose. And sometimes a cactus isn't prickly, but as smooth as the boss's bald pate.

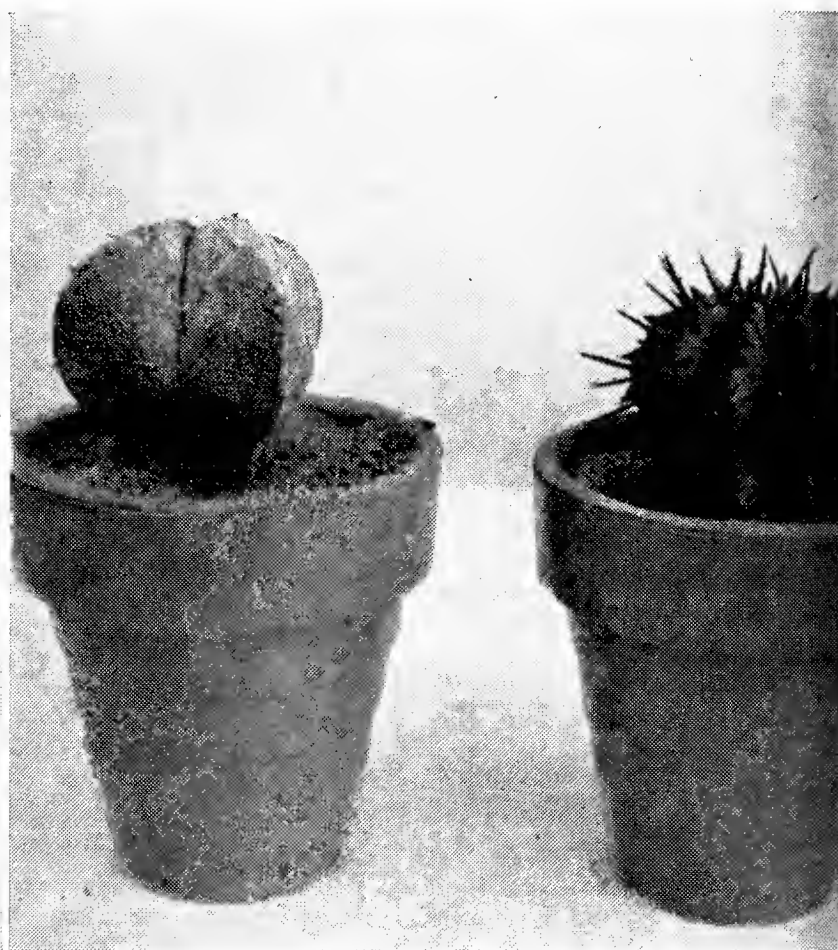
"They don't have leaves," you

continue. Neither do various Euphorbiae. And some cacti do have leaves—large shiny beautiful ones, too.

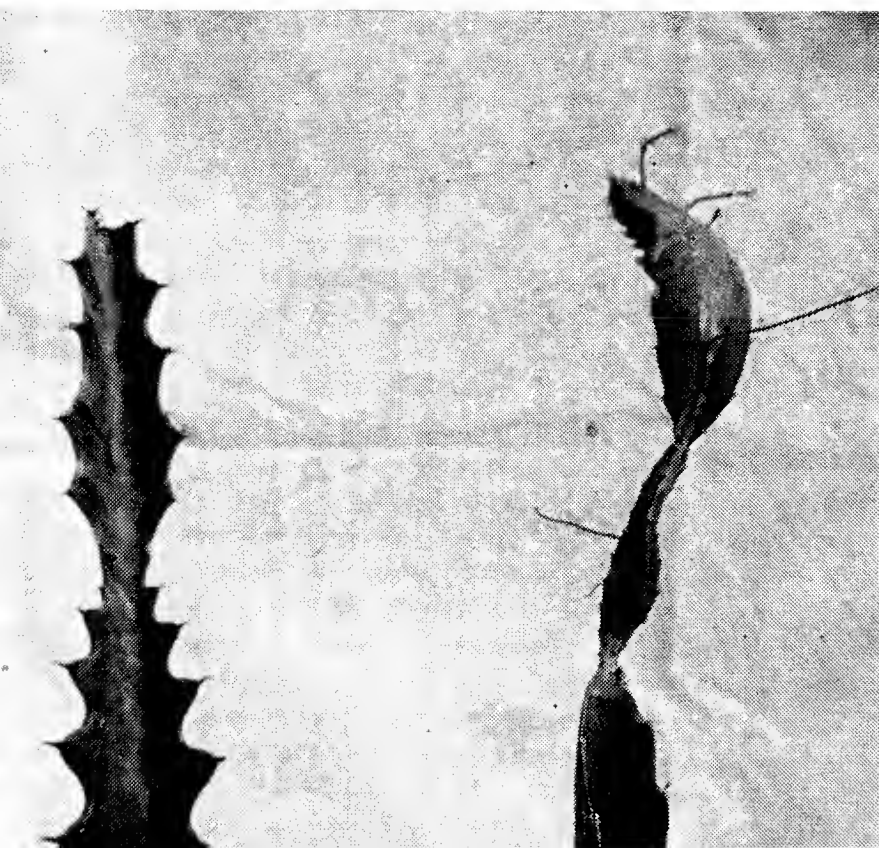
"The pesky things live in the desert with no shade and no water," you persist, mildly pleased to pursue this good natured baiting of the cactophile. Those sandy wastes are also



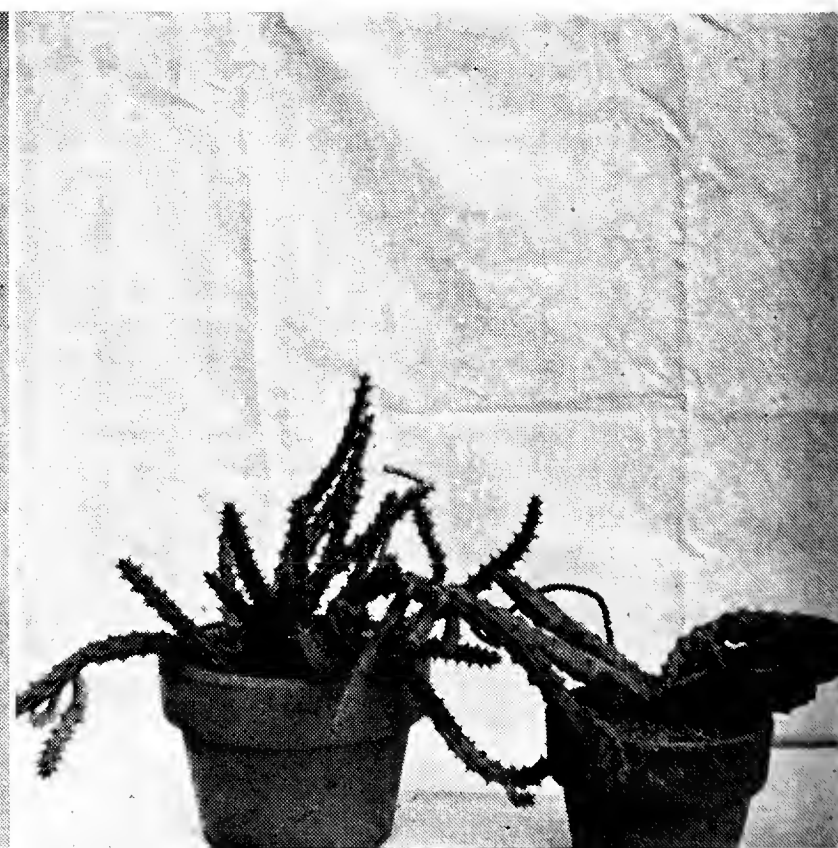
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the home of the Palo Verde, the Joshua tree, and the ocotillo, none of them cacti. And strange as it seems, some cacti live in tropical forests with filtered sunlight and drenching rain.

"All right," you concede, "I don't know a cactus when I see one. So what?"

Well, nothing really. Except it is fun, for instance, to see the expression on Aunt Minnie's face when you inform her that her treasured "star

cactus" in the parlor window *isn't* one.

"Land sakes," the old dear sputters. "All my life I've heard it called a cactus! And you say this Crown of Thorns isn't a cactus either?"

No, Aunt Minnie. But that smooth green ball of a plant with the bits of "frayed rope" sticking out on top—the Dry Whiskey that Cousin Dan brought you for a joke—now that is one.



5



6



7



8



9



10

"Well I never! Then how can a body tell?"

For a technical answer, we list the following five characteristics:

1. Cacti are perennials.
2. Seedlings are dicotyledonous.
3. The fruit is a monocelled berry.
4. The flowers are borne above the fruit.
5. All cacti have areoles.

Various combinations of the first four characteristics may be present in other groups of plants. BUT—any plant possessing *all five* may safely be

11

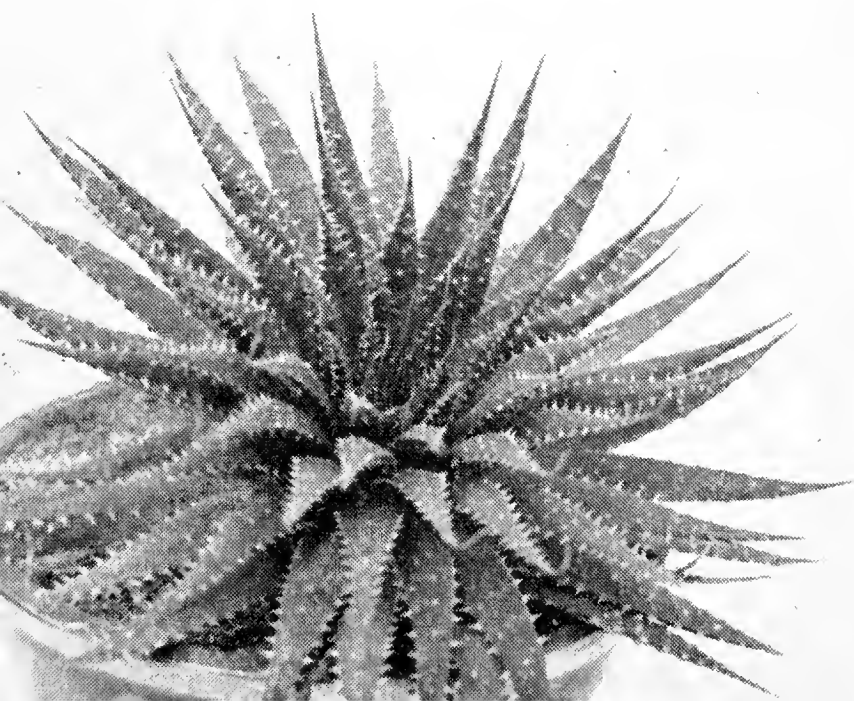
classified as a cactus. Conversely, without all five, *no* plant is a cactus, no matter how much it may look like one.

Actually, that Number Five—*areoles*—is the exclusive and ever-present trade mark of the cactus. Areoles are points of growth, usually round or oval in shape, often slightly depressed. They are the sole points of egress from the mysterious interior of these highly specialized plants. Whatever (a) glochids (short fine hairs or bristles); (b) spines, wool, or long hairs; (c) flowers; (d) new joints; (e) or leaves any given species produces, emerge from the areoles.

It is quite true that to enjoy cacti and other succulent plants one need not examine them in the cold light of botanical fact. But as one is increasingly exposed to the weird shapes, exotic flowers, strange colors and textures of this fantastic family, there develops a sort of sixth sense that identifies them. Also there are always those very special areoles. And it really is intriguing to be able to answer the question:

When is a "cactus" NOT a cactus?

*Have you guessed which is a cactus and which not, of the pairs shown? See page 31 for correct names of these plants.*







## THE THEME OF THIS GARDEN IS CACTUS

AS WE have said many times before, there are three main features to be considered in the making of any good garden. The design or plan, the plants or materials used to carry out this design, and then the maintenance. The last two things are very often taken care of in a nice way—the plants used are good, and the maintenance is perfect. The thing that is lacking in the average garden is a plan, a design, a general theme and purpose for the garden.

In the garden of Mr. and Mrs. Conrad Eckstein, 2265 Carr, in Lake-

wood, there is a very definite theme running through the whole garden, in fact, through the house and even the members of the household. Mrs. Eckstein, "Cactus Liz," she is called, likes cactus, and that is evidenced in everything about the garden: in the little sign over the front gate; in the wide bands of various kinds of cactus on both sides of the drive as you walk in toward the house; in the designs on the shutters of the house; in the plants tucked around in every odd corner on the whole grounds. Then as you go beyond the house, there is

*Part of the cactus house.*

*The cactus motif is found on the house and on the owner's clothes.*







the little greenhouse in the rear just chuck full of all kinds of cactus and succulents — beautiful ones, thorny ones, odd ones, small ones, big ones, and all kinds and classifications of cactus and allied succulents. Mrs. Eckstein could not be a very nervous woman, for in handling these little

plants, tightly packed on their shelves and full of their vicious thorns, one has to be very cautious or they'll really tell you about it.

Inside the house you see the evidence of the cactus influence in the clothes that the folks wear there, in the spreads on the tables, in the ker-

*Above and below. Showing cactus planted either side of entrance driveway.*







chiefs lying around, in the pictures on the walls, and the many pictures that they have tucked away of their little pets, the cactii.

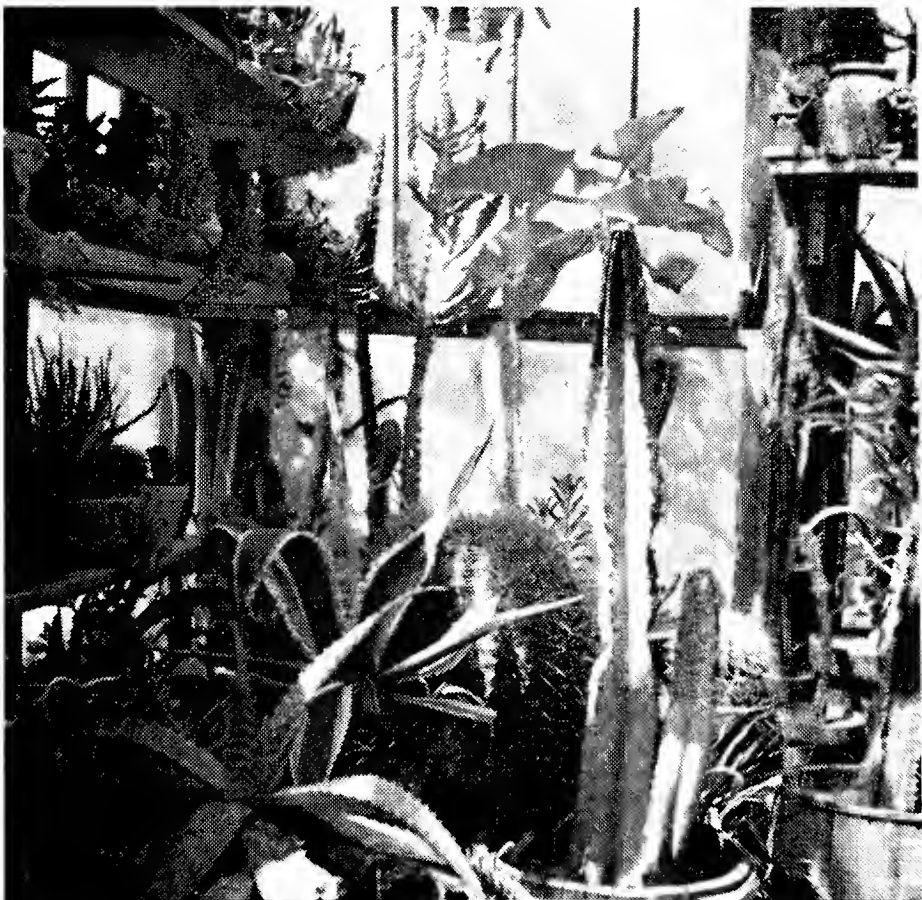
Everyone would not like these cactii with their rather vicious thorns and their dry habits, but everyone can

have *something* that he does like and make that the dominating theme through the garden and the house. It makes both of these places much more livable, much more interesting, and it shows the individuality of the owner in a nice way.

*Cactus on the house and in the ground.*



*One end of the cactus house.*



## GOOD GARDENERS USE RESTRAINT

By GEORGE W. KELLY

**M**ANY gardeners, especially the older ones, learned their garden habits when they were young; or at least they picked them up without really knowing when or how. They learned something about the amount of water that a plant requires, the amount of fertilizer that it takes to grow good plants, the general condition of soil when it is suitable for gardening, and the basic principles of the control of insects, diseases and other pests.

In recent years, many young folks have acquired homes for the first time and with the homes, gardens. They may have come from a family of good gardeners, but they were busy with other things when they were younger and at home and probably did not learn some of the things that the older folks learned instinctively when they were kids. Now they are confronted with the problem of growing good plants, trees, shrubs, flowers and lawns, and many of the basic principles of good gardening they do not know. They are making mistakes that are inconceivable to some of the older gardeners.

The most common mistake is to suppose that if a little water, or fertilizer, or cultivation, or insecticide does good, that a great deal more would do that much better. Nature just does not work that way. There is a right amount of water, a right amount of fertilizer. There is a proper condition in which to have the soil for the best growth of plants, and any considerable amount more or less than that is not good for the plant. In the last few months I have noticed a great many examples of this lack of the instinctive green thumb among the younger gardeners. I have seen where young gardeners have burned their

shrubs as though they were hit with a blow-torch by applying great quantities of highly nitrogenous fertilizer directly under the roots of the plants. I have seen where trees have been seriously damaged by adding too much anti-alkaline material such as sulphur. I have seen where there has been more damage to surrounding plants by weed-killers than the good that has come about by killing the unwanted weeds. Of course, everywhere one looks he can find examples of overwatering.

When it comes to trimming the shrubs and trees this same principle is used by many inexperienced gardeners. In place of just cutting off the limbs or twigs that have some reason for being removed, they will cut off great quantities of limbs which should be left on for the health and beauty of the tree.

These folks who have not learned the principles of good gardening through instinct or through association with older good gardeners should learn to abide rather strictly by the rules as given until they learn where they can make the exceptions safely. Learn to water only when it is needed—water thoroughly and not too often—and when it is not needed, don't water! Learn to put on the highly concentrated fertilizers with caution, a little at a time and frequently if necessary. Learn to use safer things like compost and well-rotted manures which can be put on in a little greater amount if necessary. Learn the habits of some of the common insects that damage plants and some of the common diseases which might be found; and then spray or dust for those only when they are discovered or if there is a good fifty-fifty chance that they will be found on this



particular plant. Be very cautious about the new, very powerful insecticides and weed-killers, for they can do a great deal of good in the right place, but they can do a great deal of harm if not used correctly, or in the wrong place or on the wrong plants. Learn the reasons for trimming a tree or shrub. what you are

working for, and only cut a limb or twig when that is going to do some definite good for the health of the tree or the plant.

When you have learned to know by instinct the proper time and way to do these fundamental gardening practices, then, you will have a green thumb.

## "THIS IS DAISY HASTINGS"

By SUE KELLY

Have you ever called DEXter 9300 and had a wonderful friendly voice assure you "This is Daisy Hastings"? Fun, wasn't it? And the gal with that



*This is Daisy Hastings.*

voice is as nice as she sounds. Last year, when the LOOK & LEARN Garden Visits were born, she was the starter, and then had to give it up

because of various reasons, so she got "stuck" with it this year. And a very good job of "sticking" she has done!

All those gardens which you have visited this year, all the telephoning arranged for, all the experts lined up, tickets printed and sales arranged for—that is a big job in anyone's language, and she did them beautifully. We do appreciate it very much, even though we are rather chary with our praise.

When asked for a picture to use, she suggested that we say something about her beautiful benches, instead. So, here you have "Daisy Hastings" and a mention of her garden handicraft. You really should go see her and the beautiful work she does. We have a sample of it which we will hang, shortly.

Our thanks, Daisy.

*And this is her trademark.*







## VINES FOR ALL PURPOSES

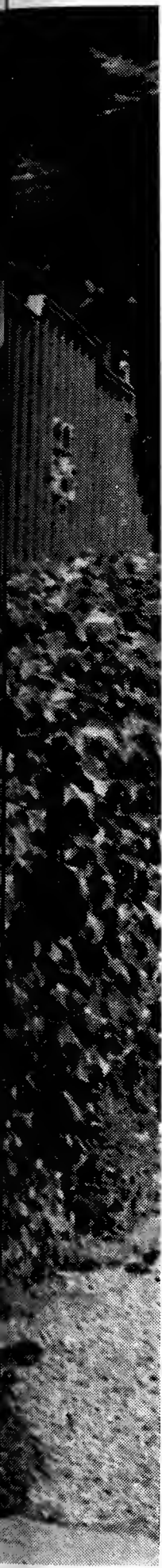
VINES of various kinds may be made to fill a very important place in landscape planting. Each situation and exposure calls for a vine of particular characteristics to fit that place, and many of the commonly recommended vines used in the East are not happy here, so it is well to learn a little about the vines that can be expected to grow here and the environment that they prefer.

There is little choice in vines to cling to a wall which is in the sun on the south or west. The common Engelmann Virginia Creeper and its refined relative the St. Paul Virginia Creeper are about the only suitable plants. The common Engelmann is rather coarse and too rapid growing but the St. Paul is slower growing and has more sticking disks to help cling to a wall.

On shady north walls and sometimes east walls there are several nice clinging vines, including the Boston Ivy, the English Ivy and the Winter-creeper Euonymus. These are all slow growing, neat in habit and the last two are evergreen.

In sunny locations where there is a fence or trellis to support them there are many good vines which will make a nice showing. Wisteria and Trumpet-vine are slow growing and frequently kill back in winter when young but eventually form large plants with almost tree-like stems. The Trumpet-vine blooms freely but the Wisteria is temperamental in this respect, apparently only blooming when it gets good and ready.

The Bittersweet vine will grow under favorable conditions but is temperamental as to blooming. They do not readily self pollinize so there is greater assurance of bloom and fruit when two or more are planted close together.



*Boston ivy vines covering walls and steps at the home of Mr. and Mrs. John Evans.*

Grapes, especially the hardy "Beta" hybrid, will quickly cover trellises and arbors and often also produce good fruit for juice and jelly. Climbing roses, of course, fill an important place in covering fences and arches. The oldtimers are, generally, hardier here. The Paul's Scarlet still leading the parade and such as American Beauty, Dorothy Perkins and American Pillar following. The climbing types of hybrid tea roses are generally not hardy here.

For a vine to grow over fences and arbors in full sun and poor soil probably nothing equals the Silverlace Vine.

For shady and partly shady locations we can rely on a great variety of Clematis and Honeysuckles. Everyone knows the Purple or Jackman Clematis which is a little hard to start but makes a wonderful display of bloom in summer. Few realize that there are other large flowered clematis which will grow here with proper care. The white Henry Clematis and the wine-colored Duchess

*Native clematis, Clematis pseudoalpina.*



*Bittersweet vine.*

of Albany are occasionally seen. There are several medium sized clematis which are very easily grown. The red *C. texensis*, the purple *C. crisa* and the yellow *C. tangutica* and *orientalis* adapt themselves to culture here readily. The small white stars of the Sweet Autumn clematis will make a beautiful and fragrant cloud over an otherwise drab fence. The native counterpart *C. ligusticifolia* is hardier, blooms earlier and is not fragrant. There are several non-climbing clematis which are grown as garden perennials. These include such as *C. recta*, white; and *C. davidiana*, blue. The best known of the honeysuckle vines are the Hall's Japanese with fragrant creamy white bloom and the Scarlet Trumpet with brilliant red bloom and no fragrance. Recently the "Goldflame" with red and orange bloom has become popular. There are several others that

might be grown here with care. In general all the clematis and honeysuckles like a deep, moist and fairly rich soil with good drainage.

There are several annual vines which can be used temporarily and will give nice displays of colored



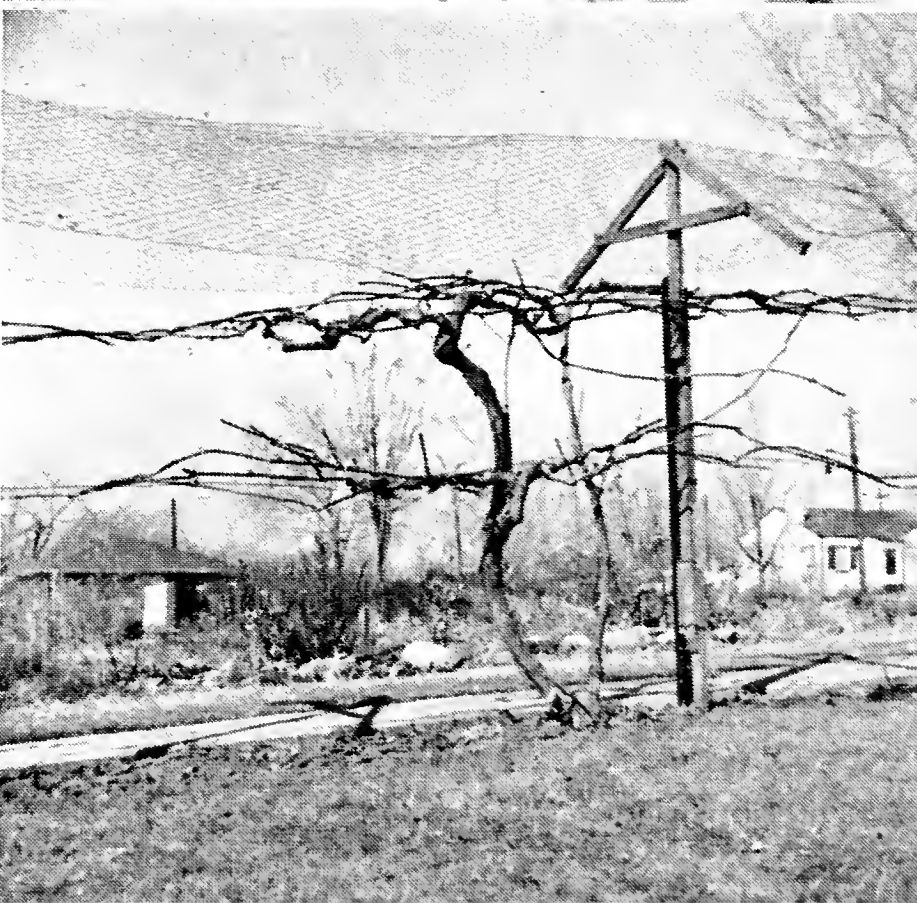
*Engelmann ivy framing a doorway.*

*Upper—Roses on fence in Frank Rhodes garden.*

*Center—Clematis at Mrs. Maurine Bush garden.*

*Lower—Grapes in Martin Keul's garden.*

bloom. These include the Morning Glories, the Flowering Beans and that very rapid grower the Wild Cucumber. The Hop vine is a perennial which grows rapidly every summer, covers a fence completely and dies down until the next spring.





For ground covers in the shade the English Ivy and Hall's Honeysuckle are often used. Ground covers in sun would include the Engelmann Ivy and Hall's Honeysuckle.

A dainty little vine for covering

rocks in a rockery is the *Euonymus minimus*.

There will be several other vines occasionally found but they need more trials before they can be generally recommended.



*Silverlace vine over fence at Horticulture House.*

## WE SEE THE SEQUOIAS

(Continued from August issue)

By MRS. FRANK MCLISTER  
President of the Garden Club  
of Denver

**I**T IS late winter when millions of tiny blossoms gild gigantea's green tops, and although it can produce cones before the fifth decade, the Big Tree is several centuries old before it reaches full productive maturity. Clouds of male pollen fall on the female blossoms, from which the cones develop and two and one-half years later, the cones are ripe, having

attained about the size, shape and color of a lime.

The dried cones shed flat, wing-margined seeds, somewhat resembling dried rolled oats. In theory, one ounce of seed can produce 6,700 trees but as the tiny seeds carry little stored food to the ground, any single seed has less than one chance in a billion of germinating, sprouting and



growing up. Coast Redwoods may sprout from trunks of old logs, but Big Trees grow only from seed.

Big Trees are rich in tannin, one reason why the trees are highly resistant to fungus and insect attacks; nor does its asbestos-like bark burn readily. It is said that no trees die of old age or disease—fire, flood, gale, lightning and man are its worst enemies, for man in one day, can wipe out what it has taken nature 3,000 years to produce. The trees have no tap roots, but many closely matted small ones, so though huge forest fires have gutted many of them, their long life allows these scars to heal. A fire caused by lightning burned for four months in the top of one tree, with no possible way to extinguish it.

Tiny flakes of maroon gum are released with the seed and this makes reddish brown writing fluid — with Sequoia ink John Muir's letters are legible today.

In April, we saw the ground thickly covered with Douglas Fir, Big Leaf Maple, 5 Finger and Sword Ferns on every log; Indian lettuce, Trillium, Fairy Lantern, Poison Oak, Huckleberry, the fast disappearing Salal—our lemon leaves — later Rhododendrons, Azaleas, Dogwood, Penstemon, Iris, California Laurel, grow where the sun peeks through.

We spent our second night at Garberille and drove north sixty miles the next morning on roads lined with these beautiful trees, to the grove of the California Federation Women's Clubs, where we ate our box lunch, and broke, again, the world's coffee drinking record. It was served by the Forestry men out of huge copper kettles, over fires in the four sided stone fire place—the only one allowed in the forests.

We heard delightful talks here by Dr. Frederick Olmstead, who found his finest fossil in Florissant, above

Colorado Springs, and by Dr. Ralph Chaney.

Everything had been planned for our pleasure in San Francisco. The ride took us through Golden Gate Park—flowers everywhere—the Japanese Tea Garden has been restored; down to Menlo Park, where we were the guests of the Woodside Atherton Garden Club for luncheon at the Allied Arts. Here, as we approached it, we saw one garden in Spanish red and yellow, and the garden beyond, was the only really blue garden I have ever seen with blue Dutch Iris and blue Wisteria.

We visited Podesta's, the wonder flower shop of the world, where the windows are changed twice a day, and where whole trees of lilacs, red-bud or dogwood line the store; hundreds of orchids, tulips, baby roses on Children's Day; boxes of lilies for this was Easter Week. Macy's had had Podesta's for the third year, and every street window was filled with flowers. The first one a cottage window, the boxes filled with tulips, ranunculus and other bulbs. The next window was a garden. The Hawaiian window with its Anthuriums, Streptocarpus, Heliconias, Orchids, and Bamboo came next. The corner window was lined with hundreds of roses of every known hue.

The main aisle had white metal containers, a flat arch filled with Easter Lilies every ten feet. On top of the cases were huge Rhododendrons, Azaleas and Lilac trees. Hawaiian girls were making leis, and on the third floor was "Raising orchids display." In previous years the displays had been changed during the week, but this year the buds opened wider and wider and the containers were filled to overflowing.

The flower markets on the corner, Gump's, Chinatown, lovely gardens, all were a perfect ending.

# MEETING THE PLANT FAMILIES

## MALVACEAE: *The Mallow Family*

L. J. HOLLAND

**A**LTHOUGH this is a relatively small family, containing only 39 genera and some 800 species, it is very important from an economic aspect. By far the most important member being that aristocrat, King Cotton, but a few others can also claim to be more useful than ornamental. The different genera contain herbs, shrubs and small trees, the latter seldom, if ever, grown except as ornamentals. Strangely enough, the entire family seems to have no poisonous, and few medicinal, properties.

Since precedence is a natural prerogative of Royalty, let us first pay our respects to GOSSYPIUM (Cotton) but I shall not risk a barrage of brickbats by saying how many species there are. Different writers list anywhere from three to eighty, so it must be somewhere between the two extremes. One thing all seem to agree on is that all Cotton falls into two groups; the New World group and the Old World group. To the former belong most of the long-staple types, such as Upland and Sea Island, thought to be indigenous to the West Indies; the latter type is probably a native of Asia Minor, but there is some doubt about this. This latter group is represented by Levant cotton (*Gossypium herbaceum*), and China cotton (*G. nanking*).

**HIBISCUS**; Marshmallow, Musk-mallow, Etc. This genera, containing about 200 species, perhaps ranks next to cotton in importance. Found pretty much all over the world, they however attain their greatest size and beauty in the tropical regions. The garden forms of Hibiscus all require fairly rich soil, full sun and ample moisture for best results. Only a few

species are winter-hardy in this region.

**H. syriacus**; Rose of Sharon: A shrub or small tree often grown as a lawn specimen. Both the botanical and common names for this plant are misleading; it is probably from China instead of Syria, and, the Rose of Sharon mentioned in the Bible was perhaps *Colchicum autumnale*. Albeit, it is a very popular ornamental shrub, flowering late in the season. The color range is from blue-purple, through violet-red to white, and there is at least one double variety. A few nurserymen list a grafted form that has red, white and blue blossoms on the same plant; its scarcity, however, would indicate that it is not too well received by the home gardener. May be propagated by seeds or cuttings of hardwood in the fall.

**H. esculentus**, (OKRA, GUMBO.) is perhaps better known to gourmands than to gardeners, but in the South there is scarcely a vegetable garden that does not have its share of Okra. Here, if grown at all, it is best started inside and the plants set out, as one would with tomatoes.

**H. militaris**, a hardy perennial to four feet, has flowers of white or rose, often darker eyed. It has produced some very nice hybrids when crossed with *H. coccineus*, the latter not being quite hardy here.

**H. moscheutos**, the Swamp Rose-mallow, is a hardy perennial that thrives in any good garden loam. The most commonly grown of the hardy Hibiscus.

**H. incanus** has sulfur yellow flowers and is considered hardy here with a mulch protection. The flowers have a crimson eye. The "state" flower of

Hawaii is a Hibiscus; *H. arnottianus*, I think.

**ABUTILON** is commonly known as "Flowering Maple" from the shape of the leaf. The flowers are bell-shaped, pendant; white, pink or yellow. Grown as a pot plant here. Seemingly, all cultivated forms are hybrids.

*A. theophrastes* (Velvet Leaf) is sometimes found growing as a weed in cultivated places. An escape from India, it has large, velvety leaves and inconspicuous yellow flowers.

**ALTHEA**, of which only one species is commonly grown, is well known by all. Hollyhock is the plant that botanists speak of as *Althea rosea*.

**CALLIRHOE**; Poppy Mallow, Buffalo Rose: Although there are nine species native to the U.S., only one is outstanding, *C. involucrata*. This is a procumbent plant with palmately divided leaves and cup shaped flowers of cherry red. Although a well grown plant will measure up to four feet across, it does not spread from the roots or nodes. Very good for dry, sandy banks, as the long tap root enables it to withstand drought quite well.

**MALVA**; Mallow: This is the genera from which the family takes its name. The only species we are interested in is a pernicious weed found growing in fields and gardens. This is *M. rotundifolia*, sometimes called "Cheeses." Best method of eradication is by pulling the plant. Easily done if the soil is moist.

*Malvastrum coccineum* is a small, hirsute plant with divided leaves and orange-scarlet flowers, found growing on our plains and foothills. One name for it is "Cowboy's Delight."

### LEARN HOW TO GARDEN!

Don't be fooled by the "Green Thumb" superstition. No matter how

green your thumb is, (or isn't), it takes the proper know-how to make things grow. If you do the proper things at the proper time, there is no mystery about it. And everyone can learn how.

The course in **GARDEN TECHNIQUE**, given by M. Walter Peshman in the Extension Course for the University of Colorado, this Fall, aims to tell the various secrets that used to be handed down from gardener to gardener "in the trade." How to plant, how to trim, how to build a patio, how to make flowers bloom, etc., etc.

Classes will be held in Room 310 at the Extension Center at 1405 Glenarm on Thursday nights from 8:10 to 9:50. The course of ten lessons begins September 25, ends November 20. Fee: \$10.

Both amateurs and experienced gardeners are invited.

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### Do You Read the Ads?

You will notice that the ads are less this month than usual. This is the off season for those dealing in horticulture, of course, but we should have more ads to help pay the cost of printing the Green Thumb. You can help by telling the folks that you deal with that you saw their ads in the Green Thumb. Sure, if you would rather pay twice what you do for the Green Thumb we will cut out the ads entirely, but if you would rather have no increase in price help us get and hold the commercial firms that support us.

The inclusion of an ad here does not mean that we guarantee their product or services, but we do try to include only those who will give you something worthwhile for your garden dollar. If any fail to do so, will you let us know?

## ROSE NOTES

By VELLA HOOD CONRAD

**F**RANKLY, I am a little disappointed in my roses this year. The bloom was nice, but of short duration—due mainly, to the intense heat. It does seem that you can water, spray and dust; fertilize and mulch; but, if Mother Nature is not with you, there will be many disappointments.

I love roses, but with the disappointment and discouragement, there is always the thought "another year will be a little better." And, that is as it should be. Roses remind me of children—each so different in its way—all lovable, and all worthy of just a little more effort on my part.

Varieties have reacted so differently this year; that applies for both the older and some of the newer varieties. I have had Madame Butterfly in my garden for at least eight or ten years, and it has always been one of my favorites. The other morning the bud was opening—by evening it was full blown. Had I not known it was Madame Butterfly, I would say it was Dainty Bess. Colors are not holding true, and chlorosis is prevalent. All the remedies that have worked other years for me are not working so well this year. Fashion has never had a trace of chlorosis, but is on the sick list in my garden this year. The plants on either side have not shown any symptoms. I have an idea, that, by careful observation and intensive checking, there will be a partial answer at least.

Take all weather factors into consideration—and weather *does* affect roses! Intense heat, and sudden drops—humidity—all those things are always to be considered. But there is much more. Water, types of soil, parentage and the understock used in grafting will enter into this picture. Our naturally alkaline soil pro-

motes chlorosis; but, I have been able to cope with this in other years by the addition of iron sulphate, aluminum sulphate and sulphur added to the soil around the plant. In our soil, which is sandy, excessive watering could leach the soil of any and all nutrients.

We know that roses do vary in hardiness here, determined a lot by the understock used in grafting. I have seen patented roses of the same variety, in the same garden, bought from different sources, however, and undoubtedly with a different understock, performing so differently, that I had an unusual desire to check and see what could be learned of their understock.

I have found local nurseries very reliable, and more than willing to cooperate in any way to pass on the best information, as well as to give the correct culture for this area.

At times I feel so inadequate. I am almost sure, that, *now* I have found the reason, and the answer, and, all at once, the whole theory explodes in my face and I am off again, to see if I can find any common-sense reasoning for some of the things that do happen in growing and caring for roses.

This, I do know—regardless of the disappointments, and discouragements, the effort is rewarded when I pick just one perfect bud of Heart's Desire; and with this year and all that I am displeased with, I have picked a number of such buds—and there is always the gardener's hope—*next year*.

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### LIMIT ON TALKS BY HORTICULTURIST

The directors of this Association ruled at their last meeting that in order to avoid the horticulturist



spending too great a proportion of his time on outside talks they would require a small charge for these talks. They left it to his discretion to be able to talk to new garden clubs once at no cost so that they could learn of the facilities available for their benefit at Horticulture House and they also ruled that additional memberships taken out in the association would count the same as cash. The fee set was \$10.00 for each talk or showing of pictures.

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### **New Regulations Controlling the Use of Horticulture House by Horticultural Organizations**

Because of the great number of organizations that would like to use the facilities at Horticulture House, it has become necessary to make some regulations for their use. Any garden club or specialized plant society or other organization allied to horticulture or gardening is invited to meet once at Horticulture House so they may become acquainted with the facilities that are available there, including the library and other such things. The only restriction, here, is that the time of meeting must be scheduled so as not to interfere with other scheduled meetings. These organizations may make arrangements to meet monthly at Horticulture House if they will fulfill certain requirements. Where seventy-five percent of their members are also members of Colorado Forestry & Horticulture Association, they may meet once a month with no cost to them. If, only fifty to seventy-five percent of their membership are members of Colorado Forestry & Horticulture Association, there will be a charge of \$2.50 per meeting or \$25.00 a year. If less than fifty percent are members

of the Association, there will be a charge of \$5.00 per meeting or \$50.00 a year. There will be no meetings scheduled during the months of June, July, and August. Five evening meetings, and five day meetings will be the limit that we will schedule in any one month. The first ten organizations qualifying will be given these opportunities. We must also ask that meetings be limited to two hours and that evening meetings be dismissed by 10:00 P.M. We would like to be able to offer the rooms at Horticulture House to a larger number of organizations for their meetings, but since this is a library for the use of the gardening public, we cannot interfere too much with that use, and also there is a great deal of work to be done by the regular help at Horticulture House which these meetings interfere with.

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### **NEW OFFICE HOURS FOR HORTICULTURIST**

Because of the great number of people who have taken advantage of our offer to help them with their garden problems, by phone, by mail and by person, it has become necessary to restrict the time our horticulturist will be available to answer these questions. There is the other necessary work that must be done, such as, preparing copy for the GREEN THUMB, and study and research into horticultural problems. Beginning at once, George W. Kelly, the horticulturist, will plan to be at Horticulture House, to help gardeners with their problems, all day Mondays, Fridays, and Wednesdays forenoons—on full days from 8:30 to 5:00, on half days, 8:30 to 1:00. If you have problems, please call on these days, as on the other days he will not be in for consultation.



## LIBRARY DONORS

July and August, 1952

Mrs. Eric (Freda G.) Douglas, 801 S. Jackson, Denver

Mrs. William Evans, 1310 Bannock St., Denver

Mr. and Mrs. John Waugh, 226 Clayton St., Denver

Mrs. R. S. Dabner, 4589 Zuni, Denver

Mr. Alexander Montoya, 4925 Kipling, Wheatridge

## Helen Fowler Has Something to Say on DO YOU KNOW YOUR GARDEN

Published by Oxford University Press and Written by Gladys Goshorn

**T**HIS unusually lively book was first brought to my attention by running on to what Richardson Wright says about it, "The author presents an amazing amount of practical garden information, history and flower lore, based on personal experience and research. It is a meaty and forthright presentation." I see there are 35 chapters, each with 20 questions with answer section following and containing facts and fancies about gardening: but most chapters are veritable quizzes, games that are fun to play, even alone. The variety of the book is immense—open to any chapter and sample a question or two; each carries a clear, plain definite answer.

Here is what the publishers say about this book, "The crimson-nailed lady in the parlor will enjoy it as a game; the callous-fingered worker in the border, with dirt under his nails, will find its horticultural information soundly helpful. The harassed program chairwoman of the garden club will welcome it, and can plan a whole year's program around it. Anyone that speaks on garden subjects or conducts discussion groups, will thank his stars for it."

It is invaluable, too, as a reference

book, as it contains an index, a bibliography and a systematic subject arrangement. Parallel with the book itself are the many amusing decorations by Julian Brazelton.

Part of an afternoon might be well spent in the Library at Horticulture House. Make an appointment with Gladys Goshorn—you will find her book there. In fact, you might even help on a busy day to answer one of those many questions that come in there over the phone. Who knows, you might have just learned the answer.

You will not be disappointed in this book, for this teacher's feeling for gardening is deep, her knowledge wide, her spirit gay.

September days are bright and sunny, but sometimes in the mind of he who grows roses, lies the thought of that sudden freeze that may be coming. And so he lingers in his rose garden just a little longer, to enjoy the last profuse blooming of his favorite flower. It seems that the roses' colors have never been brighter, their fragrance never sweeter, and never have they lent themselves to nicer arrangements. Whether he realizes it or not, he is experiencing what is known as "The Last Rose of Sum-

mer" feeling—that another rose lover felt many years ago and wrote a song about.

Our library here at Horticulture House has many books on roses, covering their culture and their history, and one book contains copies of paintings of the real old-fashioned roses that so many are collecting for their rose gardens now. We have a little rose garden at Horticulture House now too—planted by our friend Vella Conrad. We'll be glad to share our garden and our books with you.

Rose Hughes, Asst. Librarian.

## Guide to the Colorado Mountains

If you are interested in the Colorado mountains—and who in Colorado, either permanently or temporarily, is not—you should have this little booklet, "Guide to the Colorado Mountains." It is edited by Robert M. Ormes, and compiled from information collected from various members of the Colorado Mountain Club and other sources. It is arranged in convenient pocket-size so that you can take it along on your trips. The basic information relates to climbing routes up the chief mountains in the state, particularly the 14,000 foot peaks. It also gives information on the valleys, and the various interesting historical and scenic areas of the state in the mountains. It gives a great deal of history of the mining areas and of the early adventurers into this country.

Principal chapters indicate the mountains by armchair, by book, by car, by rail, by foot, by trail, by skis, and by rope. It is full of pictures and maps which would be of interest to everyone. Come into Horticulture House, look over the copy that we have in the library, and decide if you want one for your own.

The Library Committee of the Colorado Forestry and Horticulture Association wishes to take this opportunity to thank Mrs. W. G. Evans for her splendid gift of especially bound, back numbers of *HOUSE AND GARDEN*. The binding was done by Mrs. Evans' daughter, who studied the art in Paris.

These magazines are invaluable for reference and the articles on gardening have all been separately indexed for the horticultural library.

This important work of indexing was worked out by Mrs. Eric Douglas and Mrs. Josiah Holland, for which we are most grateful. It was done with great precision—it is accurate and exact. Mrs. Evans tells us more are being bound for our use at the library.

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Its flower is one of the most complicated, being about equal to the orchid in that respect. On close examination it is difficult to find the familiar parts of most flowers—the pistil, stamens, petals, and sepals, as the milkweeds have extra parts and the common ones are of unusual shape.

The seeds, each borne on its own fluffy sail of silk, are beautiful and have been gathered by the ton to use as stuffing for life jackets and warm clothing. This plant has developed a way to trap small pockets of air in this fluff in a way not equaled by man.

The empty pods that have lost their silken hoard are smooth as though varnished and are often silvered and used as the background for winter arrangements.

We think of the milkweed as a plant of rich moist fields, but smaller species are found in the mountains and on the desert. The familiar pod and silky seeds show their relationship wherever found.



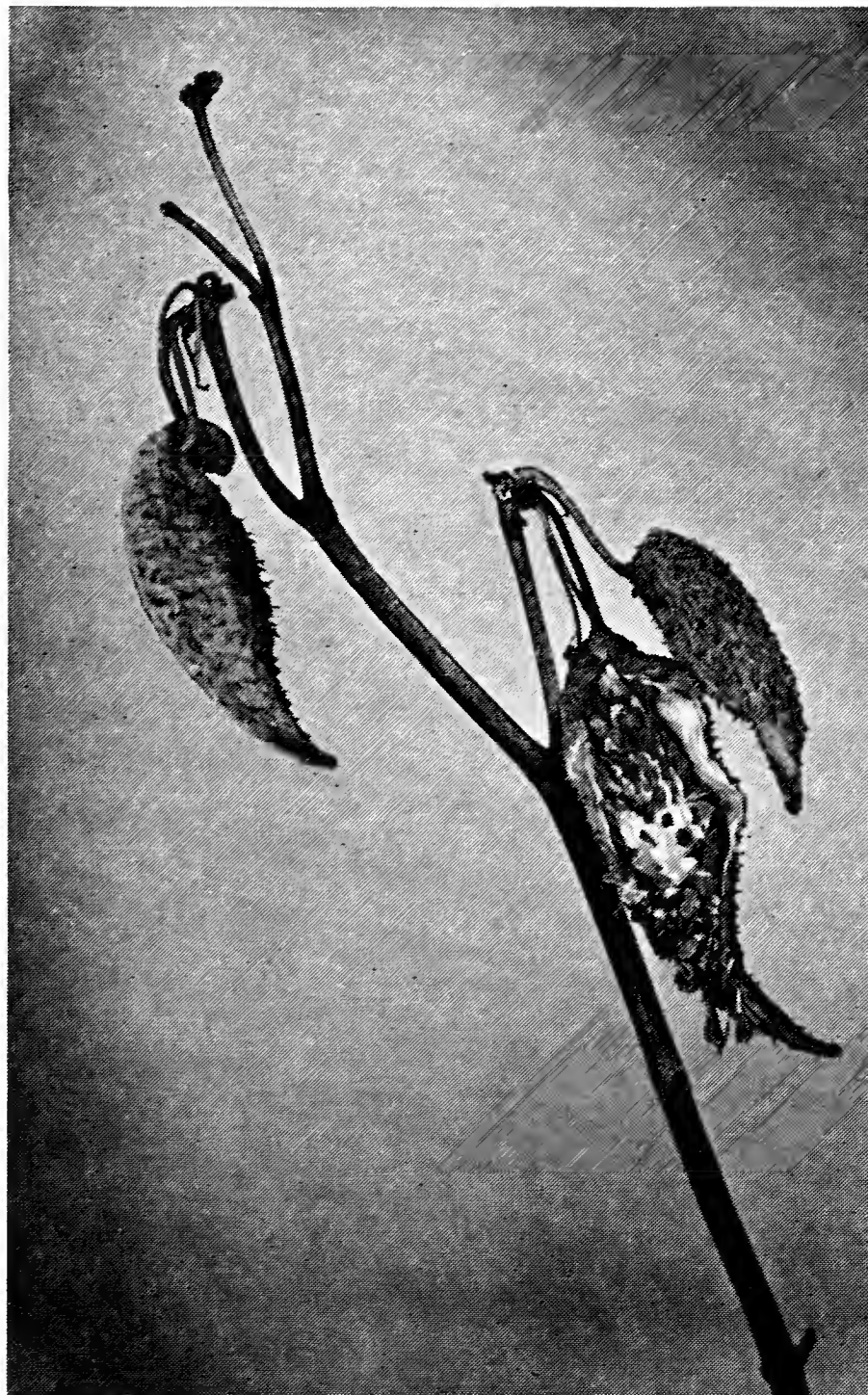


## Name of Plants on Pages 10, 11, and 12

1. Euphorbia heptagona (left)  
Pachycereus marginata var. gem-  
matus (right)
2. Astrophytum myrio stigma (left)  
Euphorbia horrida (right)
3. Euphorbia pseudocactus (left)  
Hylocereus undatus (right)
4. Duvalia, dentata (left)  
Echinocereus pentalophus (right)
5. Agave, Victoria regina (left)  
Leuchtenbergia principis (agave-  
cactus) (right)
6. Tephrocactus tuna (left)  
Kleinia articulata (right)
7. Rhipsalis cereuscula (ricecactus)  
(left)  
Echidnopsis, tessellata (right)
8. Lophophora williamsii (left)  
Euphorbia meloformis (right)
9. Perskiopsis, Porteri (right)  
Euphorbia splendens (right)
10. Euphorbia, grandicornis  
(Goebel)
11. Haworthia, aloe aristata

### ODDS AND ENDS

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Somehow I help my child to find his way  
To beauty—it will keep his soul serene;  
I ask no other bounty of this life.

—Lois Kelly Law, Alamosa, Colo.

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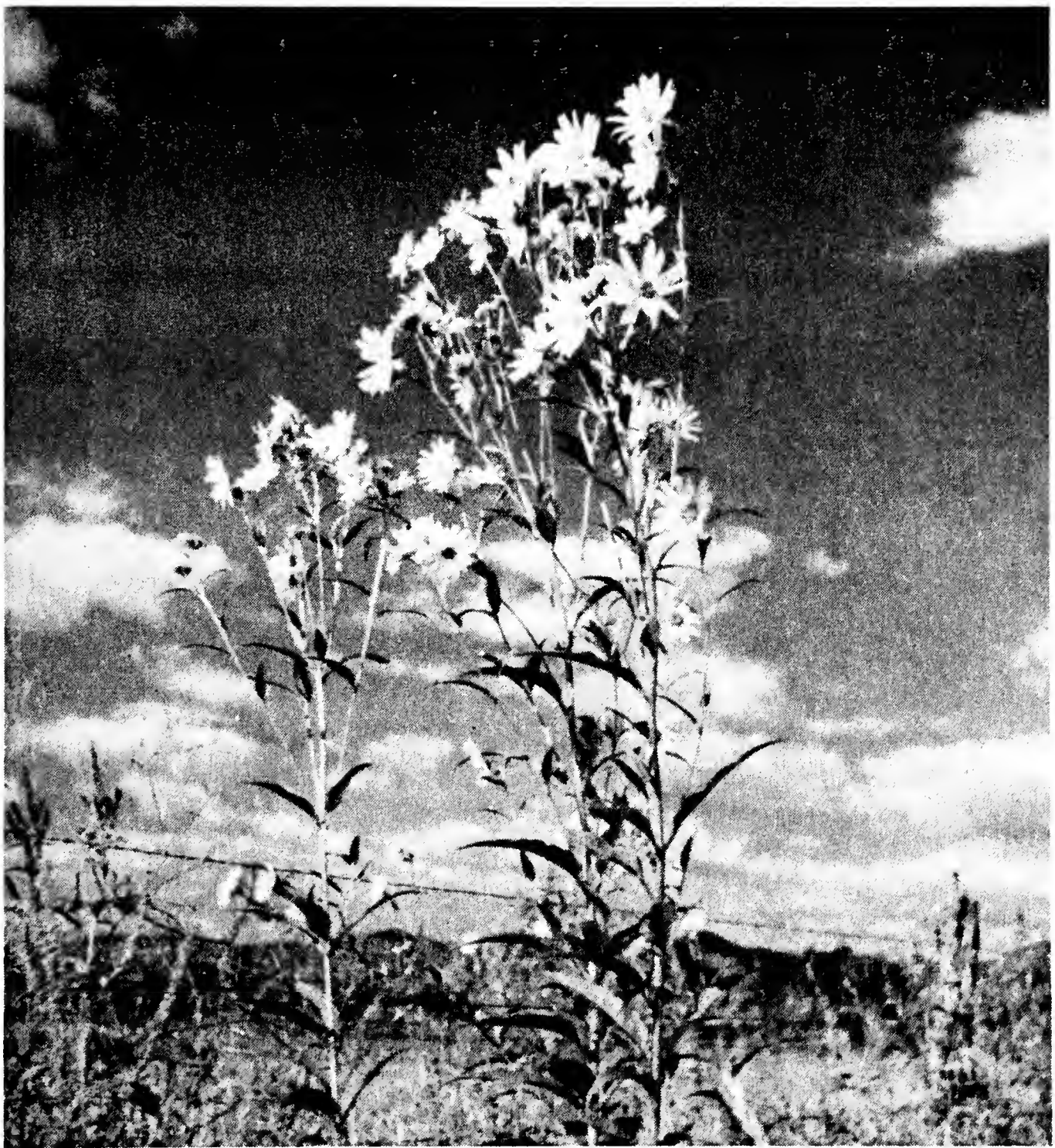


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# The Green Thumb

Vol. 9

OCTOBER, 1952

No. 10

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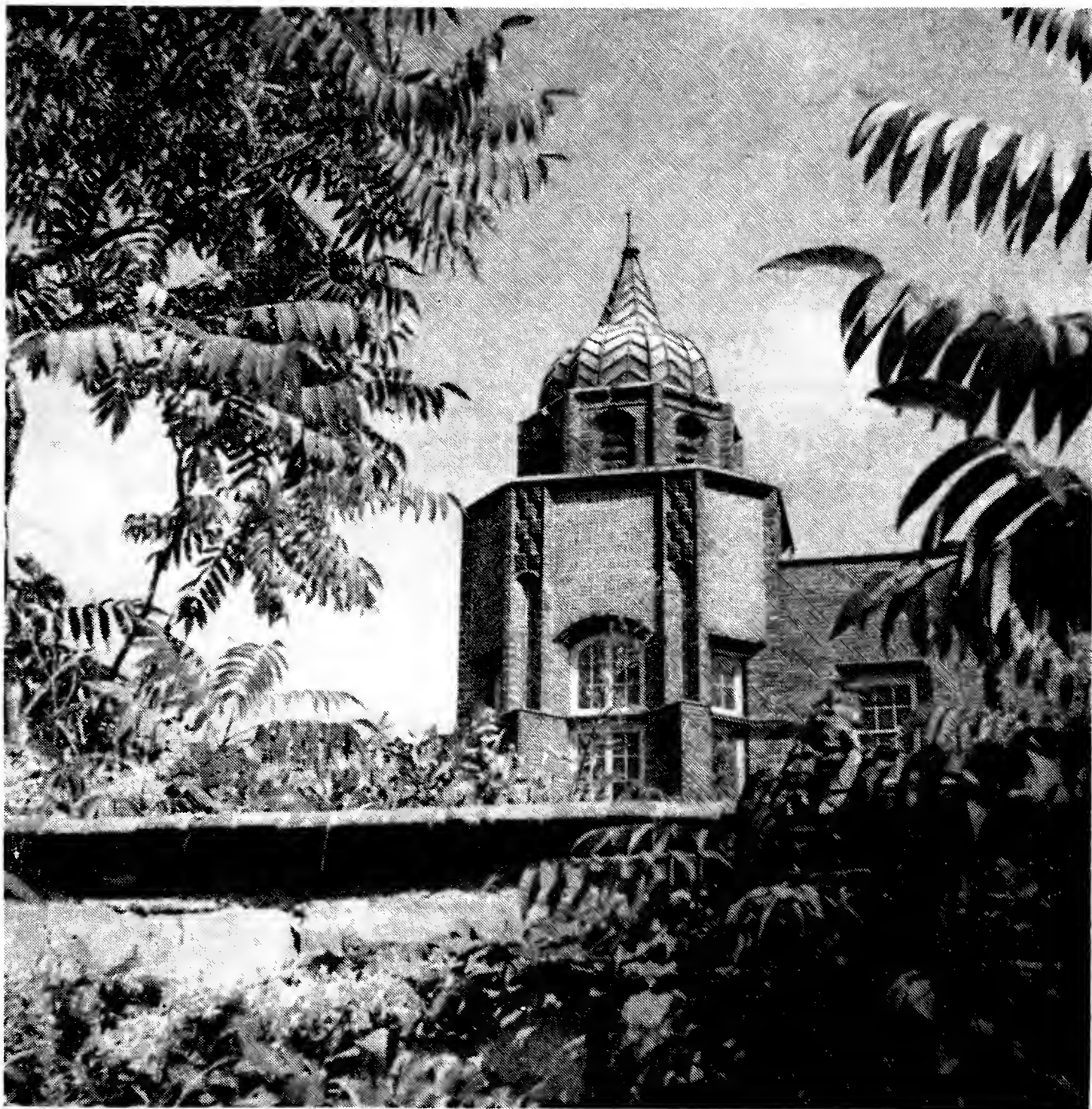
- Oct. 5, Sun. Joint trip with other Conservation organizations to explore the Pinion grove and vicinity north of Fort Collins. This should probably be our first State Park and we must all work together to get this site preserved before it is completely ruined. Bring a lunch and enjoy a nice fall trip. Leave Horticulture House, 8 A.M. Phone your registration early.
- Oct. 8, Wed. Organic Garden Club meets at Horticulture House, 7:30 P.M. Come and get acquainted with this group of good gardeners.
- Oct. 12, Sun. Oct. 19, Sun. Phone for particulars about trips on these dates.
- Oct. 22, Wed., 8 P.M. at Horticulture House. Bring your kodachromes of trips taken the past year and share them with the others who appreciate good mountain scenery. Phone well in advance so that we can plan to accommodate all.
- Oct. 26, Sun., and all November weekends are open for suggestions.

DON'T HIDE YOUR LIGHT UNDER A BUSHEL

There must be many gardeners among our membership, who have had experience in gardening which would be very valuable to pass on to other gardeners so that each one may start where the other left off. There must be many pictures that would be valuable for publication in the GREEN THUMB if we could have them available at the right time. It's almost impossible for the editor and his assistants to get out to see all of the gardens over the state that he would like to see, so won't each one of you be a committee of one to find these interesting gardens, arrange to have pictures taken or ask these gardeners to tell the interesting stories of the things they have done. Don't worry if this is not written up in a literary way. What we want is the story, and we can fix it up if necessary to make a good story from it. Tell us of these people and these gardens at least, and in many cases we will be able to run out to get the story and pictures so that we can pass on these nice things to other gardeners who will appreciate them.

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## GARDEN NOTES FOR OCTOBER

**G**LORIOUS October weather!—why can't we all just close shop and go enjoy the aspen and color in the hills? But, of course, we do have our fall clean up and garden planning to do— SO——!

October should be the harvest month—when we gather the seeds and fruits, gourds and tender bulbs, winter bouquet material and the tender plants that have been out under a bush all summer. Then there is always the annual garden housecleaning! If a garden can not be full of bloom all winter it can be neat and in good order—the lawn edges and the hedges can be given a final haircut.

The usual clean up of the perennials is imperative and necessary. Save all the vegetable matter and start a compost pit, pile or pen—any diseased foliage is to be raked up and discarded. Get the material ready which you plan to use for mulching, and apply only after the beds are well watered and in the freezing stages. If all the plants have been properly ripened up,



you need not fear the frosts. They are natural, and while they may stop the growth and blooming of the tender plants they also control the insects which otherwise might get completely out of control.

Don't forget to check the Dogwood, Euonymus and Snowball just before they drop their leaves and if they are covered with aphids, be sure to spray and kill them all, for it is these insects, in early spring, which so badly disfigure the leaves as they feed on them and cause them to roll up in tight masses.

By all means, leave the hose where it is accessible at all times, for with our more or less open winters, one never knows when it will be necessary to give our gardens an extra drink.

Emergency pruning of the shrubs and trees can be done now. Take off that limb that hits you in the head and that thorny rose shoot that tears your hose. It is better practice to leave the extensive pruning on the flowering shrubs until just AFTER they are through blooming; then there will be less loss of bloom. Get a good tree man to check your trees for dangerous limbs and protect them from storm damage later.

The ambitious gardener can find time now to work on the inanimate things like gravel walks, flagstone walls, walks, platforms, trellises and fences.

The good gardener will always take the opportunity when areas in the garden are free of plants to improve the soil—dig in manure, peat or sand and leave it rough over winter for the frost and rain to improve it.

Conditions that influence the success or failure of fall planting in this area include our usual HOT SUN, DRY AIR, WIND, and ERRATIC WEATHER. Many plants can be successfully moved in fall by paying careful attention to ripening them, by being sure that the soil around their roots is wet when it freezes up, by shading, bracing and mulching as necessary; and, of course, the usual consideration of careful digging with sufficient roots, the protection of these roots from wind and sun and the systematic cutting back of the top. Many perennials, which lose their tops anyhow, are as easily moved in fall as spring. It is the woody plants which are most seriously affected by the weather over winter.

Your fall bulb planting should be well in hand by now. Tulips, crocus, narcissus, grape hyacinths, or hyacinths—all planted in pleasing color designs and clusters rather than in straight lines. Plant them among your shrubbery, and see how wonderful it is to find a bloom peeking out early in the spring.

Roses—teas, floribunda, and polyanthas should be taken care of now. If planted in beds—cut to a uniform height so the canes won't be whipped by the winter winds, and then hill or mulch as before. If you have climbers, most rosarians advocate laying the canes down and burlapping or covering with mulches. You can also leave them as they are for the winter and when fully leafed out in the spring, cut off the damaged parts. In that way, you won't cut off any bloom for the coming season. Shrub roses should have been pruned just after blossoming last June. If you neglected to do so then—wait now—until next post-bloom time.

Lawns can still be successfully seeded during the first half of this month and often they will get sufficient root systems to carry them over winter if seeded during the last half. Getting the seed up and competing weeds are less of a problem now than in spring. Leave the new grass rather long and be sure that there is a mulch of some sort covering the surface of the soil around the new grass plants.

# MEETING THE PLANT FAMILIES

## *Cactaceae*

By L. J. HOLLAND

HERE is a family, that without much contradiction, can be said to be totally American. Although the greatest distribution seems to be in southern Arizona and New Mexico and the northern part of Mexico, one may encounter some member of the family from near the Canadian border right on through to the plains of southern Argentina. Some botanists hold that one species of the genus *Rhipsalis* is native to western Africa; if this be true, it is the only species not indigenous to the Western Hemisphere. However, there is another group that maintains that in some ancient time it was a migrant from Brazil. When one considers that this species, *Rhipsalis cassytha*, is found on most of the islands of the West Indies, the latter trend of thought is not without foundation.

While certain *Stapelia* and *Agaves* are sometimes erroneously called cactus, the true cactus may be easily identified by the spines emerging from the areoles, and although the leaves are almost always present, they are usually inconspicuous and often very minute. Spines range from the dagger-like thorns of the Organ Cactus to the hair-like appendages of the Christmas Cactus. Flowers vary greatly in color and blooming habits and the plants themselves ranging from the tiny *Echinocereus viridiflorus* to the giant Saguaro (*Carnegiea gigantea*) of Arizona. By no means are all cactus confined to arid regions, a great many are from the rain drenched forests of South America; some growing on trees as epiphytes.

While there are probably 75 genera and some 1,200 species, only a few of the better known members will be treated in this article, with

maybe a stranger introduced now and then.

Since we Coloradans are all fairly well acquainted with the Prickly-pear, we shall lead off with the genus *Opuntia*, of which there are about 125 species.

*Opuntia arborescens* is our "Tree-cactus" which is found from Colorado south to Mexico. Seldom growing over 8 feet high, it has bright scarlet flowers and is often confused with other similar species; however, it is the only bush-like cactus that I'm sure we have, although *O. imbricata* has been reported by some writers, and may extend into the southern part of our state. While cattle have been wintered on *Opuntias* of various species; and the woody parts of *O. arborescens* have been made into canes and novelties; it would be stretching a point pretty far to say that there was any economic value anywhere. On the other hand, countless thousands of acres of land have been rendered unfit for grazing by Prickly-pear, the flat-jointed cactus that is so prevalent on our plains, and both man and livestock has suffered grievously from contact with their spines.

Although there are about eight species of the "flat" *Opuntias* native to Colorado, three species are the most prominent. *O. humifusa*: joints dark green, comparatively free of spines, flowers yellow, but some plants have orange or rose flowers, fruits edible, but be careful to wipe off the tiny spines. *O. hystricina*: very spiny, rosy-crimson flowers, and lastly, the densely spiny *O. polyacantha* that has been so aptly called "Hunger Cactus," whose flowers are primrose yellow.

What most of us refer to as "Pin-



cushion" or "Hen-and-Chickens" Cacti really belong to three separate genera; *Echinocactus*, *Echinocereus* and *Mammillaria*, and few of us take the trouble to differentiate between them. In fact, these genera are distinguished one from another more by the way the flower is borne, than by coloration of flower or shape of plant, so for our purposes let us consider all the ball-type cacti as a group, picking out interesting specimens here and there.

*Echinocactus whippeli* is often called the Fish-hook cactus, because of its recurved spines. Flowers yellow. Southwestern Colorado.

*E. glaucus* has rosy pink flowers. More widely distributed than the former.

*E. ingens*, of Mexico, is one of the largest of this genera, sometimes reaching a height of 10 feet and 3 feet in diameter. One of the several species called "Barrel Cactus."

*E. myriostigma* and *E. turbiniformis* are two spineless species often grown as window plants.

*Echinocereus viridiflorus* is the "Hen-and-chickens" cactus that is so common throughout Colorado. Flowers greenish-yellow.

*E. fendleri*, with reddish-purple flowers, and *E. paucispinus* with scarlet flowers also grow in a clustered manner and as often carry the "Hen-and-chickens" appellation.

All three species have been used as rockery subjects and sometimes as window plants.

*Mammillaria* are generally distinguished from the two preceding genera by the more prominent tubercles or "nipples", and that the flowers are borne between the tubercles, not on them. The largest genera of the cactus family.

*M. missouriensis* with its yellow flowers is found over most of our eastern plains. Seldom more than 2 inches in diameter. Solitary or clustered.

*M. vivipara* is another cactus that grows in a clustered manner. Flowers reddish-purple. Throughout the plains area.

There are several cacti that must be handled exclusively as house plants in this region. Some of them are well known and others should be better known.

*Zygocactus truncatus*, Christmas or Crab Cactus, is very popular, due

to its ease of handling and beauty of blossom. The fact that this cactus usually blooms in mid-winter greatly enhances its value as a pot plant. Two that are closely related to the above, and surpassing it in beauty, are *Epi-phillum ackermani* with scarlet flowers, a day bloomer; and *E. oxypetalum*, with white flowers nearly a foot long, a night bloomer. Still another that should be noted here is *Heliocereus speciosus*, with red flowers up to 6 inches in diameter that remain open for several days.

Any of the foregoing may be grafted on more upright sorts, such as *Pereskia*, with interesting results.

*Pereskia aculeata* is unique in that it is a cactus with true leaves, sometimes as large as 3 inches long by 2 inches wide. *P. grandifolia* has even larger leaves. Both of these are nice for a greenhouse, but grow too large for the average home.

A great many cacti grown as pot plants are esteemed more for their unorthodox forms than for any real beauty. This group would include such as: *Ariocarpus fissuratus* (Living Rock); *Astrophytum myriostigma* (Bishop's Cap); *Cephalocereus senilis* (Old Man); *Lopophora williamsi* (Dumpling Cactus); etc.

We could scarcely close this list without mentioning two that we cannot grow here. Although both were

referred to in the beginning of this article, it will do no harm to treat more fully of these two.

*Carnegiea gigantea*, the tree cactus of the deserts of Arizona and Sonora. (Often called Saguaro or Suwarro.) Sometimes attain a height of 50 feet or more. The white flowers are not large and are borne at the uppermost part of the plant, so going unnoticed by many people.

When one sees a hedge of *Myrtillocactus geometrizans* (and one may see them in parts of Old Mexico), with the fluted stems of varying sizes, one realizes that the name of "Organ Cactus" isn't too far fetched.

Truly, as one writer has so aptly said, this is the "Fantastic Clan." Cultivation of various cacti is very simple. The desert types, including all those native to our State, do best in average soil, with no fertilizer added. A slightly alkaline condition is indicated. The ones that are grown as pot plants require a richer soil and more moisture, but good drainage is absolutely essential to both. **DO NOT OVER WATER.**

A tip on those shy bloomers. Give them a rest period of a month, withholding all water except the minimum required to live. It seems to work at times, then again, nothing does any good. Oh, well, what is a few years in the life of a cactus?

## HOW MANY DRINKS CAN YOUR SOIL HOLD?

By M. WALTER PESMAN

**D**ISTURBING reports about prolonged drought are coming in from various parts of the country. Cattle are being sold in anticipation of scarcity of pasture, winter wheat may not be planted, crops are drying up before the grain has set.

Under such circumstances it is no

wonder some of our Denver visitors complain about wasting water. Irrigation water should not be allowed to run down the gutters, leaky faucets should be repaired, and so on. Water waste is never justified in an arid country.

Now it is true that even run-off



water is recovered farther down to the extent of perhaps eighty or ninety percent, and that some irrigation water is actually used two or three times over by this recovery process. That, however, is no excuse for waste.

Careful gardeners are gradually learning more about the correct way of irrigating. A little sprinkling now and then, is poor routine for garden men. A well-soaked soil can go without a drink for many a day, so that many good gardens need watering only twice or at most three times a week. If you see the sprinklers going in our city parks the day after a rainstorm, don't accuse the parkmen

are there is enough moisture for another day or two. If your energy is good, it might be well to dig down and see just what shape the soil is in, six inches down. That is where the roots should be getting their moisture, not from the top layer.

The Agricultural College specialist in irrigation practices, A. J. Hamman, advises the use of a soil auger to tell how far moisture has penetrated into the soil of a pasture.

Ordinarily, he says, pastures need to be wetted down to a depth of two feet. Alfalfa, however, should have moisture to a depth of four or five feet. Common lawn grasses should be induced to root deeply. A thin moist top layer over a dry bottom is almost sure to be fatal for a lawn.

What appears like quite a complicated way of telling the moisture content of soil, is described by the research professor of soil science at Michigan State College, Dr. George J. Bouyoucos.

Where irrigation water is scarce and expensive, a block of plaster of Paris, or nylon, is buried in the ground, through which electricity is made to flow. All you need to do then, is to "read your meter" to find out if you should irrigate. How simple! Or is it? Anyway, the method has already shown that many crops can be grown with much less irrigation, and yet yield the same. And that is important.

I can hear the Old-Timer-Gardener grumble at this point and say: "All these new-fangled mechanisms may be all right in their place, but they won't take the place of the keen eye of a good gardener. He can tell by the look of his flowers and leaves, when they need water. A plant tells very clearly about its wants. All you need to learn is how to listen to it, and understand its complaint before it becomes serious."



This, and other clever drawings in this issue by Mrs. Ann Arneill Mueller.

of poor judgment: it may be the very best time to soak the soil properly especially if there is little sunshine—meaning evaporation.

"How will I know, whether my soil or lawn needs watering?" A number of tests are being used, some simple, some fairly intricate.

The "knife-test" is effective in many cases. If you can easily insert the blade of a pocket-knife (or kitchen knife) into the ground, chances

## THE ORGANIC METHOD IN HAITI

By A. REYNOLDS MORSE

WE recently visited Puerto Rico, Hispaniola and Jamaica in search of the West Indies Paradise featured in the colored ads. I envisioned the West Indies as a tropical heaven where one could retire and grow succulent crops in succession all the year round on rich, fertile, naturally "organic" soil. My first shock came when I realized the West Indies are really nothing more than spines of rock (usually limestone) with the sparsest kind of earth cover. That little cover is subject to the most awful erosion from years of neglect and abuse. And far from being a tropical paradise Haiti and Santa Domingo in particular contain surprisingly vast stretches of arid desert of cactus and thorns quite like Arizona, cut with dry washes down which floods rush uncontrollably in season. The "lushness" of the tropics is confined to relatively small areas near streams. These fertile spots are so intensely cultivated and so carelessly attended that it is a wonder to me the land survives to produce at all. Limestone and loose conglomerates always just underlie the little pockets of soil. And this soil is so shallow and so thin and so neglected that it was a constant miracle to me that the islands can sustain the amount of life they do.

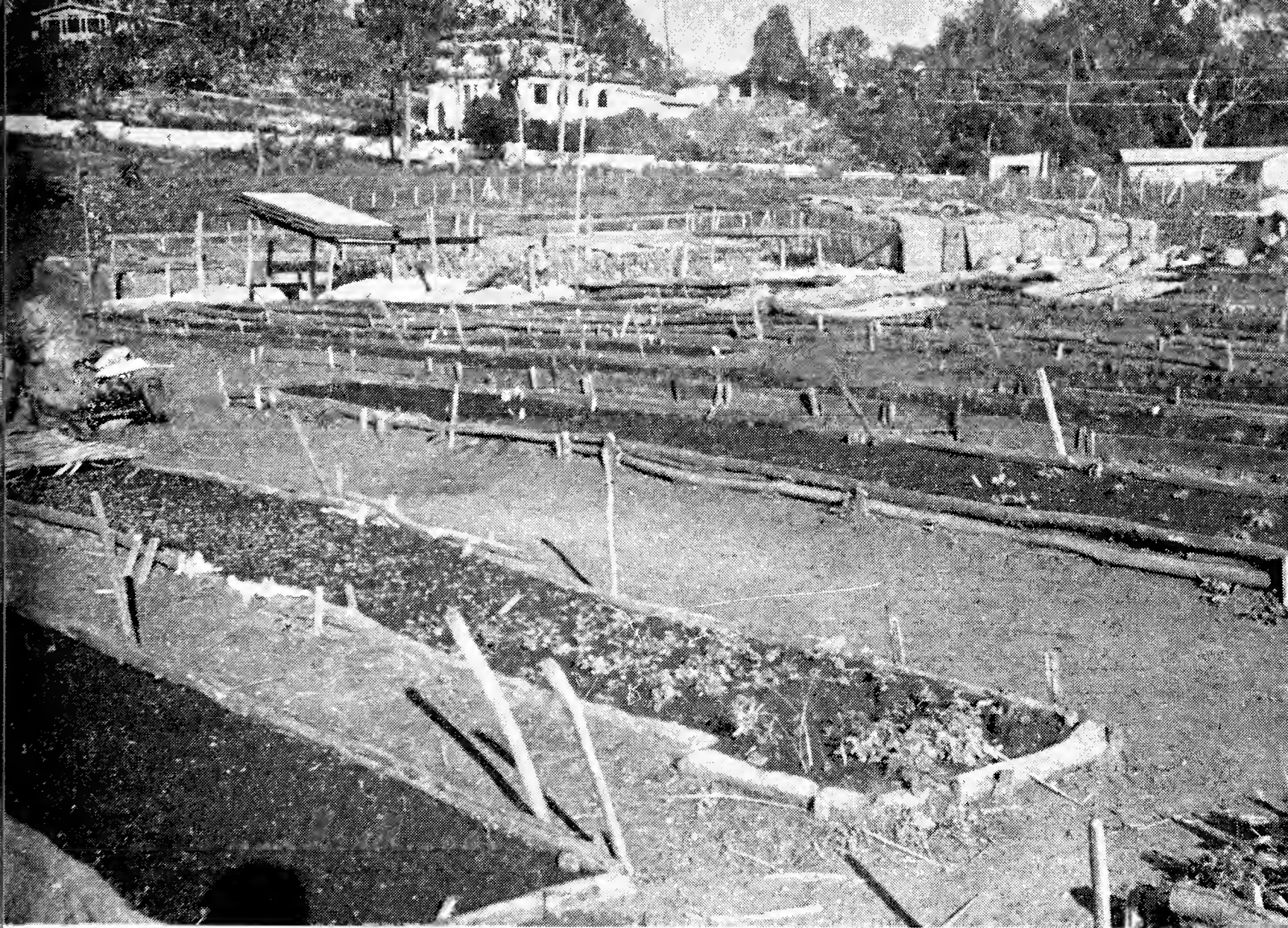
Santa Domingo is a quaint but modern realm of opera bouffe—police everywhere with fearful people goose-stepping (literally and figuratively) to a dictator's whim—but at least they are working.

Haiti, too, is a land of comic opera officials, but its people are indifferent and are not working. Santa Domingo is as orderly as Haiti is lackadaisical about their natural resources. Santa Domingo has two-thirds of the area of Hispaniola and less than one-third of

the people. Haiti has one-third of the island and more than two-thirds of the people. Every square inch of Haiti is occupied—teeming with poverty and life. Colored people are everywhere in desert, plain and hillside. The Haitian roads are third-rate and rocky and stream with pedestrians and reek of excrement. The average colored people hate the interloping white man. It made us uncomfortable to hear them whisper "blanc" at us as we intruded on their crowded domain.

We selected our Haitian hotel from a travel folder. It featured a "swimming pool" and a "tropical garden." It turned out to be an old ramshackle place so unkept, in fact so downright dirty and with food so extremely poor that one morning after a round with bedbugs, we could no longer stand it and fled to the neat little hostelry called Chatelet les Fleurs up in Kenscoff where we had had a delicious lunch of fresh garden vegetables the day before. After a hot water bath and a breakfast from an immaculate kitchen (both are something to be appreciated in Haiti, believe me) we walked out onto the mountainside to discover there the organic gardens that have made their owner, Mr. Atherton Lee, internationally famous as a flower grower. On a shelf of land with limestone spines sticking up through the red earth looking out over the great plain of the Cul de Sac and the inland sea, L'Etang Sumatre, to the North, was an amazing demonstration of what the soil in the West Indies could do if it was taken care of. The strawberries were just ripe and row after row of them yielded many quarts a day.

It was with real surprise that we



found this one small ten-acre patch high in the hills above Port au Prince at Kenscoff where the organic method was being successfully used and the word "conservation" known. In an alp-like surrounding it was like a dream of another world to discover Mr. Atherton Lee amidst his flowers and vegetables. But organic gardening there is different from organic gardening in the northern United States. The soil is so intensely alive with bacteria that damping off of the seedlings almost always occurs unless the soil is sterilized by heat before planting. Mr. Lee uses 55-gallon drums cut in half and mounted in cement frames for sterilizing the soil in his starting beds. After treatment the reddish soil becomes black from the carbonization of the abundant organic matter in it.

Mr. Lee uses night lights on daisies and chrysanthemums with excellent results in setting more flowers. He prides himself on a dwarf Venezuelan chysanthemum grown from a few sport cuttings. Carnations do very

well in his raised beds. He flaunts gardening tradition with two-year old carnation plants which are heavy yielders. He is forced to water constantly as the soil is so shallow and the sun so intense. To protect young plants from the sun, he provides mat covered frames. Still many young plants are casualties to sun or draught because of the ineptness of the help who require constant supervision. With typical Haitian perverseness, little value is placed locally on animal manure. It is to be had virtually for the cost of hauling. Mr. Lee uses it abundantly, and as a result he does not need to do a great deal of composting.

When he retired to Kenscoff several years ago, Mr. Lee first began to raise organically grown vegetables for the local market. But with Nature so otherwise provident and the people so unused to conventional garden produce, there was no local demand for truck garden vegetables as we know them except from a few members of the small foreign colony



in Port au Prince and Kenscoff. And so he has gradually turned to commercial raising of flowers.

Gardening on any scale like Mr. Lee's in Haiti presents many problems. Locating enough land and getting title to it would be an insurmountable barrier to a newcomer as the country is already so crowded and land titles so obscure and uncertain. In fact there is a piece right in the middle of Mr. Lee's gardens to which he has not yet been able to obtain a clear title from some complexity of local ownership. A worse problem is the ineptness of the labor. The Negroes in Haiti really hate the whites and as Mr. Lee said "They do not understand kindness nor do they seem to resent cruelty." He is handicapped, as he puts it, because he has first to tell them how to do something, then show them how, and finally to do it himself, if it is ever to be done. In spite of having over 70 (!) gardeners he is still a hardworking man—and no wonder when it takes a native handyman a half-hour to screw a hose onto a faucet! But the exasperations of his calling are nothing compared to its satisfactions and some of his flowers reaching Miami and even New York by air are bringing real praise from horticulturists. His gardens remain an oasis in a desert of neglect and of indifference to Nature, and show what the organic method can do even in the tropics in a difficult worn out soil.

One must drive as we did, hard, slow, dusty miles the length and breadth of Hispaniola to see what *real* land abuse on a national scale can *really* be. Nature somehow manages to repair the damage done by man faster there than here, probably because of the continuous growing season and relatively more moisture and possibly more organic matter falling into the soil. But evidences of

the fabulous cost of man's abuses are everywhere. Take for example, the decline of the Banana Industry in Jamaica because of disease. You see the soil hunger in the way a palm tree near a cesspool overflow out-produces a non-fertilized tree nearby ten to one. The number of bedrock spines seen on all sides are a shocking sight to one used to top soil. Glimpses of what can and might be done if the organic method could be followed on a large scale in these benighted islands are few and far between.

On the mosquito-ridden plain of Artibonite we found a Point 4 Agricultural Experimental Station with the American taxpayer footing the bill to try to discover what other crops than rice can grow in that area. Some vegetables will thrive, others not, and if they do thrive, will the natives bother to grow and use them? I rather doubt it. And on the hillside at Kenscoff we found Mr. Lee's organic gardens. But in general the picture of organiculture and its future seem to me to present a bleak and discouraging outlook in the much-publicized West Indies.

In the United States we may still be able to restore the organic content of the soil but on these spines of rock called Puerto Rico, Hispaniola, and Jamaica you cannot create soil from stone nor conserve the earth when it has been washed down into the sea.

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I regret to say that the battles for the great cause of conservation in good old U.S.A. are not being won and, further, that they will continue to be lost until the thousand and one independent and competing conservation organizations get together for unified national objectives, and throw their massed strength against wasteful and ignorant exploitation.—J. N. Darling in the National Parks Magazine.



## ROSE NOTES

By VELLA HOOD CONRAD

**O**CTOBER, and time to think about winter protection for your roses; but, first I want to review a few of the summer's highlights.

Cooler weather in August and early September and our roses came through as roses should. As I write this they are staging one last gorgeous and colorful parade. The color intensity and the size of the blooms does compensate for the disappointments I felt through the summer months.

Fashion, too, has responded to a little extra care, and as I have said before, weather does play a definite part. Roses like the cooler weather. As a final measure, sprayed directly onto the foliage for the chlorotic condition, a mixture of magnesium sulfate (Epsom salts) at the rate of a pound in six gallons of water.

Next year, I shall do this much earlier if I detect signs of chlorosis; as well as working into the soil equal parts of iron sulfate, aluminum sulfate and finely ground sulphur. At the same time I may add a fourth ingredient, if I see the need—ammonium sulfate.

On our last Look and Learn tour we saw Chrysler Imperial, one of the A.A.R.S. winners for 1953. It was blooming in Dr. Hermann's garden and the two plants are tests for Germans of Van Nuys, California. Many of us will be trying it next season. In color, it is a vivid rich crimson; a tapering bud opens to a large high-centered flower, with probably 40 to 50 petals, and it is very fragrant.

More and more I appreciate floribunda roses. Their uses are so versatile. They are a joy in my perennial bed, and furnished color the entire season. I saw them used in planters—edging patios and flanking walks—in each instance, they fit perfectly.

I have kept right on with my spraying and dusting program. I pick up and burn any foliage that drops. Care in this respect avoids trouble, and to date I have not had "black spot" in my garden and cleanliness plus a very heavy mulch of peat seems to be the answer.

Do not water as heavily or as often as you have, but please do not let the roses go into the winter dry.

After the leaves start dropping and I see signs of dormancy I start hilling clean soil up around my roses. A two or three-inch mound will be sufficient this month, and it will protect the bud union should we have an unexpected and sudden drop in temperature. I cannot tell you exactly when to finish your hilling-up process. We have to use common-sense here. Some years we have open falls that carry over into winter. The foliage hangs on, and there is very little, if any, frost in the ground. This is the time we must be watchful of weather. I do go out and cut back extra long canes to about 18 inches to avoid whipping in the wind, and I have my soil all ready to hill-up to 8 or 10 inches at the first report of real cold weather.

Our problems would end if it would stay cold, but rarely does that happen here. We have alternate thawing and freezing and drying winds. It is a constant vigil with roses. I love them, and this is a labor of love and achievement—a challenge to grow them successfully, despite the odds we grow them under in this area.

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Crocuses as a group are intrepid little beauties, coming into flower before the chill of winter has gone from the early spring air. Plant them by the bushel this fall.

## SAY IT WITH A GARDEN

By HELEN D. STANLEY

**I**F YOU happened to be an invalid, young or old, permanent or temporary, how would you like to have a whole garden placed by your bedside, complete with rows of plants, all nicely labeled with their common or scientific names? If you got as bored as most shut-ins, the very idea would immediately take your mind off your aches, pains and give you a new interest to brighten your days.

Such a garden is easy to make and the pleasure it is sure to give is certainly worth the effort.

Because cacti and succulents are such fascinating plants, I always use them in these bedside gardens. Bizarrely different from any other form of plant life, their amazing designs, bewildering colors and occasional flowers, even in captivity, are a source of constant interest to any invalid. Each species has its own peculiarities and all have in common the evolutionary ability to adapt themselves to the vicissitudes of climate, soil and neglect. They solve their own problems with ingenuity and cheerfulness.

One such garden was made in a deep Mexican pottery baking dish, decorated attractively with figures of peons in a desert. There was no drainage so a thick layer of charcoal was spread on the bottom. Roughly, the soil mixture was a third each of garden loam, leaf mold and coarse sand with a small amount of charcoal stirred in to keep it sweet.

It is better of course to have drainage but since these gardens are more or less temporary plantings, the attractiveness of the container should be taken into consideration and the plants can always be transplanted later. Even without drainage, if carefully constructed, the gardens often last for months.

Ten different plants were used in this garden, all arranged in a stiff little row with their scientific names printed on small pieces of wood (sawed from a tongue depressor) glued to gaily colored cocktail toothpicks and stuck firmly in the earth before each species. This group included—hold on to your hats!—*Kalanchoe tomentosa*, *Echeveria setosa*, *Bryophyllum fedtschenkoi*, *Cereus peruvianus* and *Trichocereus spachianus*.

My bed-ridden friend had a good laugh over the tongue-twisting names which she could eventually rattle off like an old time botanist. This little gift opened up a whole new world for her as she became so interested in cacti that she read a number of books on the subject and later joined a Cactus Society. She, incidentally, is well today after an eight year bout with TB and it is not surprising that her hobby is growing cacti.

A garden for seven year old Kathy who was suffering from rheumatic fever was first made with cuttings. These were cut from the parent plant with a sharp knife and stuck in clean sand kept constantly damp, where they soon put down their own tiny roots. They were later transplanted to permanent quarters under the supervision of the small gardener and labeled with their common names. Kathy spent many happy hours watching her "bunny ears," "panda plant," "baby fingers," "tiger jaws," and "little trees," grow into their weird and varied shapes. She said they made her feel like their mother and why not since she had practically "borned" them herself!

The Public Libraries have books on the subject where you can filch the

scientific names (be sure to match them up with the right plants!) and your florist or dime store has a plentiful supply of nice specimens. Look around the house and you are sure

to find any number of containers and your druggist will give you a tongue depressor. What's to keep you from presenting your favorite invalid with a Bedside Garden on your next visit?



### *Ailing Trees Need More Than Guesswork*

## GOOD INTENTIONS CAN GET YOU NOWHERE!

A tree can't tell you where it hurts or what it had for breakfast, which is often too bad for the tree. Home remedies or hazy guesswork by well-intentioned but inexperienced practitioners takes a big toll among the leafy green population every year.

Tree care is a science that depends upon thorough examination. The expert looks at leaves, twigs, bark and roots, then makes test borings and perhaps a soil analysis before making a diagnosis.

Take the oft-thought simple matter of pruning. A dead or diseased limb is removed from the tree. If the job is done properly, the wound heals quickly and both the health and appearance of the tree are unimpaired.

When the pruning job is finished, the absence of stubs is the hallmark of the skilled arborist. Stubs big enough to hang your hat on tell a tale of ignorance of the nature of growth. Stubs can be nothing less than detrimental to the health of a tree, for the heartwood is exposed to attack by fungi — with eventual decay and death as the result.

And that's just one little phase of tree care! Only the man with the best and greatest facilities can hope to cope with the multitude of special problems confronting the shade tree of today. Diseases relatively unimportant or even unknown a few years ago now threaten entire species.—AeroMIST News.





*Views at either end of cross axis from gravel patio.*

## VIEWS, C GROUN

*A Dis*

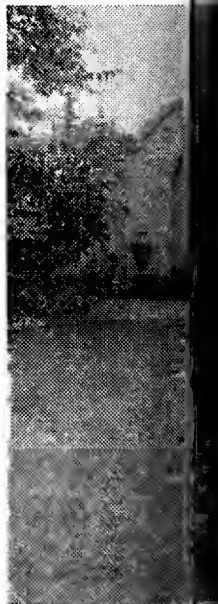
Scenes in the Garden of  
7035 East



*Progressive views on entering west gate to garden.*

*The view from  
room.*

*Developing this  
ing the wide*







*Looking across gravel patio from rear of house.*

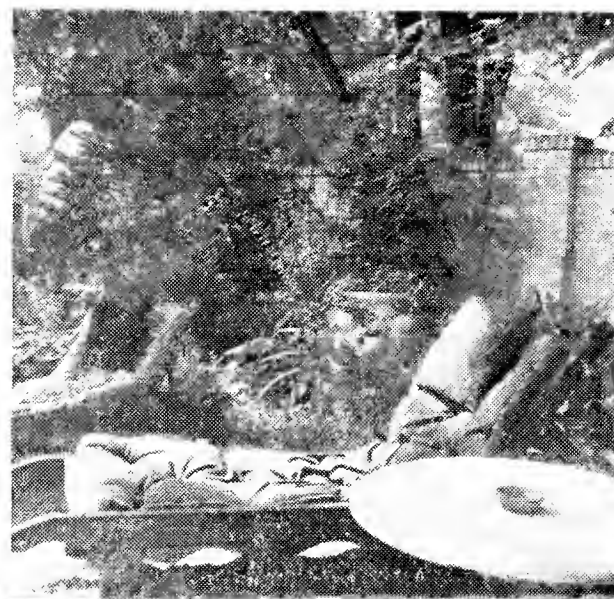
## ENS AND VERS

*Garden*

and Mrs. Frazier Arnold,  
at, Denver

*from living*

*to design-*



*View to gravel patio from the dining room.*

## THE WHY OF MULCHING

By LILLIAN A. CASTELL

**M**ULCHES were originally used to prevent the evaporation of water from the soil, and that is still an important function. But as horticultural knowledge grew, they became recognized as a valuable aid in protecting the roots of the plant from heat and cold, and in controlling soil erosion.

Evaporation and transpiration (the excretion of water vapor by the green tissues of a plant) account for about half of the total soil-water loss in humid regions, and for more than that in less humid areas. Both processes remove water from the root zone. By checking the rate of evaporation during warm weather when plant growth is at its height, a summer mulch conserves the soil's moisture and assures a continuous supply of soil solution to the plant's roots.

This soil solution is like a thin, chemical soup made of minerals dissolved in the water, which supplies the plant's nourishment. No matter how rich the soil may be, nor how perfectly balanced its mineral content, the plant's roots cannot take up food unless there is sufficient moisture. The amount of soil solution available is governed by capillary flow, the same force that pulls ink up in a blotter. As moisture evaporates from the soil, capillary water keeps rising to replace part of what has been lost. The amount of water stored in the soil is thus depleted, and with it the soil solution available for plant growth. Plants stop growing at the maximum rate even before the moisture content of the soil in the root zone is reduced to the actual wilting percentage.

Plants need sunlight, but the place for it is on the leaves, not on the earth itself. The baking action of the

hot summer sun on exposed soil soon hardens the surface into a crust that shuts off the supply of essential oxygen. And because this crust is compact and dense, heat is conducted rapidly to the root zone. Too much heat is as damaging as cold to plant growth. A mulch interposes a barrier between the sun's burning rays and the earth, keeps the soil cool, and prevents soil temperatures from fluctuating between hot days and cooler nights, prolonging the growing day of the plant.

Mulches are effective protection against soil erosion because they eliminate or minimize the impact of falling raindrops. The "splash" erosion resulting from this impact is the cause of much of the total erosive effect of water, and is the beginning of the gully action that carries away fertile topsoil.

Mulches are classified as organic and inorganic. Common organic mulches are straw, manure, peat, and compost. Examples of inorganic mulches are stone, gravel, and sand.

The newest inorganic mulch is expanded vermiculite, which has all the properties of the ideal mulch and none of the limitations of other materials. Vermiculite can hold three times its own weight in water (5 lbs. will take up about 2 gallons). Compare this with the moisture-holding capacity of good garden loam, which can hold only half its own dry weight; or sand, which absorbs only one-fifth its own weight. Vermiculite releases its water gradually, providing a surer, longer-lasting supply of moisture.

The millions of air cells that interlace each particle of vermiculite give it an extremely porous structure. Even when all but saturated with



water, the particles hold so much air that the all-important oxygen can get to the plant's roots. Vermiculite does not mat down, rot, or become soggy. It contains no harmful disease organisms, for the high temperature at which it is processed (2000 degrees

F.) makes it absolutely sterile. Vermiculite is chemically inert, so there is no danger of robbing the soil of nitrogen, as with some organic mulches.

It is not necessary to remove a mulch of vermiculite. Simply turn it into the soil in the fall or spring.

## FOR KIDS OF 8 TO 80

### *Seed Travellers*

**A**LL the processes of Nature are interesting when one takes the time to study them, but one of the most spectacular things is the methods used by seeds to get distributed over new soil.

Many are distributed by the wind, some simply because they are so light that they may be carried like dust, but many others have developed very ingenious devices to assist in the wind distributing them. Look at the fuzzy, spirals of the Mountainmahogany, the winged seeds of the Maple and Ash, the airplane wings of the Linden, the parachutes of the dandelion and milkweed and the cottonballs of the cottonwood and willows.

Some plants have developed mechanical methods that shoot the ripened seed for some distance and others depend on being knocked some distance from a tall seed pod by passing animals.

The Cockleburs, Wild Licorice, Stickseed and Burdock depend on their being attached to passing animals and carried to new locations.

The juicy fruits like the cherries, raspberries, hawthorns and currants depend on being eaten whole by birds or large animals and being carried to distant places while being digested. Nuts may be planted by rodents who intend to dig them up in times of need, but often forget where they are buried.

Water may wash seed down a hill

or even down a stream to new locations. The passing feet of animals knock or carry them short distances. Some plants may easily come loose from the ground and roll with the wind scattering seeds en route.

Every plant has developed its own method of seed dispersal, and its distribution over the earth depends partly on this and partly on its requirements for soil, and protection.

This makes an interesting study when strolling in the city or hiking in the wild.



## CLEMATIS

By CATHARINE WOODS

**A** FLOWER family I like very much is the Clematis family. It has many species—most of them are hardy here. A few are bushy plants, like *C. davidiana* with its deep blue flowers, and *C. mandchurica* which has clusters of fragrant white flowers. But it is the vines that are best known. We have all admired our native *Virgins Bower* that makes something beautiful of an old fence or broken tree.

Of the small flowered varieties *C. texensis* is a dainty, graceful vine with urn shaped scarlet blossoms. Its hybrid, *Duchess of Albany*, is a more vigorous vine and has beautiful pink bell shaped flowers.

The large flowered group is the most numerous and hybridizers are adding new ones each year. *C. Henryi*, *C. Candida*, *Crimson King* and *Ramona* have been favorites of mine. Some of these have blossoms measuring as much as ten inches in diameter. Space being a very limiting factor in our garden I will have to wait on the plantings of my friends to see the new ones.

Clematis have no pests, but are subject to disease. However, I have grown them for many years and have had no trouble. I try to carefully follow the growers' instructions. They like our alkaline soil (isn't that a joy). The soil must be mellow, rich and well drained. Prepare it to a good depth, as the roots like to go straight down. Young plants should be trimmed to about twelve inches. Place the crown three inches below the surface. Always keep a support for the plant so that the stem will not be broken or cracked as that is where disease may enter. They must have sun at least half the time. Most varieties bloom on the current year's growth. These should be cut well back in the Spring or they may be treated as herbaceous plants. Some like the beautiful double white *Duchess of Edinburgh* bloom on year old wood, hence all the good wood of the previous year must be preserved. Many varieties bloom from June to frost. All have ornamental seeds. Clematis also make excellent cut flowers.

## WILDFLOWERS REQUIRE NO PASSPORT

By M. WALTER PESMAN

**I**F DANDELIONS ever put you in an ugly mood, because they sneaked in, so to say, without permission, or if you rankle at so many other weeds that came from Europe and Asia—here is one consolation: the same thing has happened all through history and all over the world.

Plant interlopers pay no attention to boundary lines, and come in without a passport, even though laws may be passed against them at times. As far back as 4000 B.C. Britain's Neolithic farmers are said to have brought

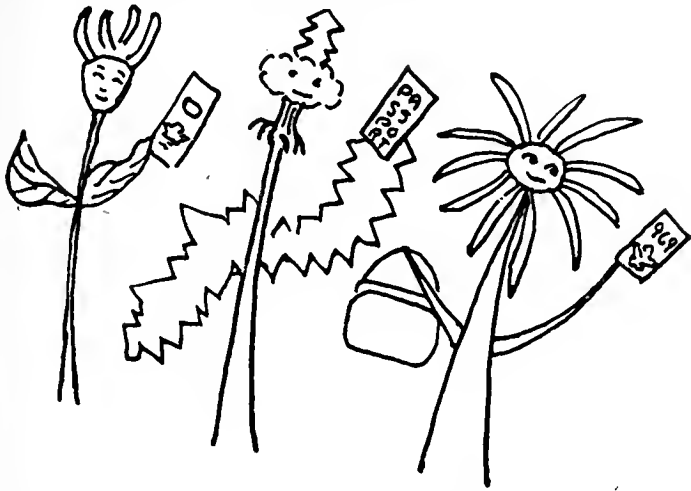
in the delicate fumitory, a purplish little bird-like flower.

Only 2,500 species out of the 4,500 found in the British Isles are actually native, or else they came in so early there is no possibility of a record as to whose immigration laws they violated.

From our side we are returning the compliment. Our common waterweed, *Anacharis*, invaded the canals of Holland and forces the Dutch to spend hundreds of thousands of guilders to keep their channels open. Our



## IMMIGRATION OFFICE



beautiful and interesting monkeyflower was introduced into England about 1812 as a rarity; it is now common in most parts of the British Isles.

The war—interesting enough—has drawn attention to another introduction from the USA: it is one of the most decorative flowers to beautify

blitzed sites all over Western Europe. The English call it the rose-bay willow-herb—we know it as Fireweed. In 1947 it greeted me all along the railroads, from France, Belgium and Holland to Sweden and Norway—a friendly reminder of home.

All of this, however, is no valid excuse for relaxing our efforts to keep out undesirable new weeds. If, for instance, you find an unusual-looking kind of Russian Thistle with slender hooked spines on the tip of the leaf, be sure and report it before it spreads. It is apt to be *Halogeton glomeratus*, a new introduction that is spreading from the Utah line, highly poisonous to stock. So far it has been reported only rarely in Colorado, but—it may sneak in unless people are on the alert.

## SCHOOL AND COMMUNITY FORESTS

**I** BELIEVE there is need of school and community forests, along the state's main streams as they course across the plains, and also where no trees grow. The country and small town school should have 10 acres or more (forty or more would be better) where the children and people of the community can study the native shrubs, grasses, soil, water infiltration, shifting sands, and the wild life. If an irrigation lake or pond is on the area that much the better. Other states are taking children into the

school forests and giving them some ideas of conservation. Conservation should be integrated into all school text books from the primer up through college. Some states are doing this too. Some of the school plains forests could plant windbreaks. Trees will grow on the plains if the right ones are selected and properly cared for.—Excerpt from a letter by H. N. Wheeler.

*The plains country may look desolate or attractive depending on the plantings made.*



# LOOK AND LEARN GARDEN TOURS REPORT

By MRS. PAUL L. HASTINGS

**W**E HAVE seen 29 of the nicest gardens in Denver these last four months, and I hope the owners of the gardens remember us as pleasantly as I remember them!

This is just a final word of appreciation to these gardens' owners for being so gracious to us:

May: Mr. and Mrs. Frank Bentley, Mr. and Mrs. George Garrey, Mr. and Mrs. Frank McLister, Dr. and Mrs. Jan Schoo, Mr. and Mrs. Lewis Smith, and Mr. and Mrs. B. L. Rosenberg.

June: Mr. and Mrs. Marcus Bogue, Jr., Mr. and Mrs. W. F. Clendenen, Jr., Mr. and Mrs. Henry Conrad, Mr. and Mrs. M. V. Evans, Mrs. Sara Flynn, Mr. and Mrs. Robert Stovall, Mrs. L. V. Woods and Miss Ruth Woods.

July: Mrs. Maurine Bush, Mr. and Mrs. Frank Harris, Mrs. Christine Hutchinson, Mr. and Mrs. Victor Lombardi, Mr. and Mrs. Frank Rhodes, Mr. and Mrs. A. W. Sku-

derna, Mr. and Mrs. John Waugh, and Mr. and Mrs. J. B. Woodward.

August: Mr. and Mrs. Frazer Arnold, Mr. and Mrs. Galen Broyles, Mr. and Mrs. Robert Hart, Dr. and Mrs. A. A. Hermann, Mr. and Mrs. John Skuderna, Mr. and Mrs. Paul Timm, Mr. and Mrs. Donald Marshall, and Mrs. Ella Mullen Weckbaugh.

We have tried to show you big old gardens, little old gardens, big new gardens, and little new gardens, and in all except one or two cases, the maintenance was all done by the owners.

Some of our experts and some of our ticket takers have helped us more than once, so I'll indicate with stars how many times. (We'll let them put these stars in their crowns!) Double shifts count double, too:

Experts: George Amidon, Gertrude Ballinger,\*\*\* Irene Barnes, Mrs. Carl Bieler,\*\*\* Mrs. William Crisp, Mrs. C. Earl Davis, Henry Gestefeld,\*\* Herbert Gundell,\*\*\* Mrs. Ralph Hill, Mr. W. H. Hoefle," Mrs. Homer Hoisington, Mrs. E. G. Horne,\*\* Sam Huddleston,\*\* Fred Johnson, Ed Johnson, George Kelly,\*\* Sue Kelly,\*\* Martin Keul, Mrs. L. G. Kneeland, William Lucking, Maurice Marshall, Dick Ohrendorf, M. Walter Pesman,\*\*\* Clair Robinson,\*\* Ernst Scheffler, Ida Schoo,\*\*\* Moras Shubert, Mrs. Persis Owen, Earl Sinnamon, George Stadler,\*\*\*\* Stanley Stolte, Charles Wilmore,\*\* Ruth Wilmore, Scott Wilmore, Dr. Helen Zeiner.\*\*

Ticket Takers — Co-hostess is a nicer name and really applies to the job done better also: Mrs. Elna August, Elizabeth Bahm, Charlotte Barbour,\*\*

*One of the attractive gardens shown on the Look and Learn Tours.*



Vahna Broman,\*\* Evelyn Butterfield, Mrs. M. F. Carney, Mrs. Elmer Cochran,\*\* Bernice Cox,\*\* Mrs. Roscoe Fleming,\*\* Grace Forcade, Mrs. George H. Garrey, Mrs. George Hastings, Mrs. Loren Hilton,\*\* Mrs. W. H. Hoefle,\*\* Rose Hughes,\*\*\*\* Mrs. John E. Jensen, Rose Leet, Josie Lehman,\*\* Marge Lipsker,\*\*\* Mrs. Bill Lucking,\*\* Mrs. Frank McLister, Mrs. R. B. Middleton,\*\* Mrs. Albert Patten, Bernice Petersen, Jean Phillips,\*\*\*\* Ella Roark,\*\* Mrs. B. L. Rosenberg, Polly Schlosser,\*\* Verna Timmerman,\*\* Mrs. Guy Venrick, and Doris Weith.\*\*

Our first series of Garden Visits, held in 1951, netted Horticulture House \$413.00, which we think is wonderful for the first year. This year, our second, netted \$949.94, which we think is wonderful also; but even more important is the enjoyment and added garden knowledge and inspiration that we all received.

Our publicity has been very ably taken care of by Mrs. Paul Broman, Mrs. H. M. Kingery, George Kelly, Don Peach and L. C. Shoemaker.

Our very gay signs that have been at each garden to direct us in were donated by Mrs. Lillian Blanchard, and made by her son, Bill.

Thanks to all of you, and happy catalog dreaming until next spring.

### NATURE IS YOUR GREAT RESTORER

We are thankful to Mrs. Hubert Work for supplying us with this beautiful quotation from our former president, Calvin Coolidge.

"There is new life in the soil for every man. There is healing in the trees for tired minds and for our overburdened spirits there is strength in the hills, if only we will lift up our eyes. Remember that Nature is your great restorer."

### Joseph J. Shomon Says in CONSERVATION NEWS

"In a nation half at peace and half at war, whose freedom heritage is measured by the yardstick of natural resources, the continued misuse of our life's sustaining assets comes as a shocking commentary to our democratic mode of life. Obviously something is seriously wrong with our conservation effort. And obviously too it will take something more than half-hearted measures to correct the situation. The most overwhelming task before conservationists today is proper recognition for the wise use of natural resources by the masses of the people. Scientists are fully aware of our resource status, but the American people are not."

### THE GOLDEN RAIN TREE

This tree is found in the south end of Washington Park and at Garden Center. The botanical name is *Koeleruteria paniculata*, and it is also called Goldenraintree and "varnish tree." The beautiful yellow panicles are very attractive and unusual in Denver horticultural work. The flower is followed by a bright seed pod which is equally attractive. These trees originally were semi-hardy in Denver but by collecting seed from a few trees which were growing here the Park Department has succeeded in growing a hardy strain.

S. R. DEBOER

The question comes in, how late this fall can grass seed be planted? It could be answered that it all depends on the soil, exposure, location and the kind of a season. All of September is safe but, in general, it is safe to plant grass seed here or in any location until 6 weeks or 2 months before the ground freezes hard.

H. F.

## HELEN FOWLER ANSWERS A FEW QUESTIONS

**T**HE Trillium-wakerobins. Yes, they are springflowering. There is but one hardy out of six which we have tried here at the nursery. The six are: *T. cernuum* (Nodding Trillium), *T. erectum* (Purple Trillium), *T. grandiflorum* (Large Trillium), *T. recurvatum* (Prairie Trillium), *T. stylosum* (Rose Trillium), *T. undulatum* (Painted Trillium). The hardy one is *T. grandiflorum*, with white flowers. All Trilliums grow from 6 to 14 inches.

*Asperula odorata*—Sweet woodruff. 8 inches, spreading, herbage fragrant, hence the common name of New-mown Hay. Grown under trees, shrubs, in borders, rose gardens, but only in the shade. White flowers. It should be grown if only for its unusually good looking foliage.

Yes, there is an *Arabis* with pink flowers, *Arabis blepharopylla*. It is fragrant, grows to one foot and is hardy here. Personally, I do not care too much for rose-purple flowers. It is neater than the common white kind, can be raised from seed although with a low percentage of germination. To increase *Arabis* from divisions, fall and summer is not the best time for the operation. It is one perennial that looks mangy after dividing, but bear with it awhile; it will come back, even in poor soil, with its attractive mats of late summer foliage.

*Ajuga* can never be beaten as a groundcover. Clear blue flowers in June. One kind has green foliage, another bronze. They grow anywhere without trouble but they do not like too dry a spot. Members of the genus are found in every continent except America. Writing of *A. reptans*,

Gerarde (1548-1612) says that the juice of the bruised leaves has strong curative properties when applied to wounds or sores.

The lead plant is *Ceratostigma plumbaginoides*. Mounds of vivid blue. Late midsummer into October. When petals fall, red calyces give color to cooling days.

### A STUDY OF THE GENUS SEDUM

We are pleased to learn that a member of our association, Mr. Harry L. Keele, is making an extensive study of the Sedums. With the accuracy of a scientist, Mr. Keele should in time do something worthwhile with this mixed up group. Anyone having a special Sedum will do well to get in touch with Mr. Keele at 814 Julian Street or by telephone at TAbor 6950.

For a lawn—one man does it this way: The surface soil is loamy and well screened. It is spread evenly, boards being used to keep the wheelbarrow from cutting into the soft earth. Strips of scantling, set on edge, define the paths. When it comes to sowing, parallel lines of twine are guides to even coverage. Finally the whole planted area is rolled.—H. F.

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Mr. Harry L. Keele, 814 Julian St., Denver

### Principles of Weed Control

By HELEN FOWLER

Written by three distinguished Ph.D.'s from Rutgers University, all outstanding in the field of weed control research. The publishers claim for this book, "a greater promise for increasing farm efficiency than anything since the introduction of the tractor." Every page contains new, helpful ideas and new scientific information on checking weeds and in some cases on complete weed eradication.

A little background of chemistry will help the reader to understand the facts presented in this book but this does not mean a course in chemistry would be necessary to get every good from this publication—it is very simple with control chemicals fully discussed, especially 2,4-D. There is also valuable information on various sprayers, ground, airplane and hand, and flame throwers. One critic calls this, "Principles," a classic on weed control literature. Be that as it may.

But wait—we are all so eager to learn the best and easiest methods of getting rid of weeds. We should not forget that the common pigweed and the much-maligned purslane are sometimes vegetables, in which case potato

plants would be weeds also if they grew among them. How bad are these plants that are not wanted? Are they any good at all. Dr. Bailey, the great cyclopedist, considers weeds a treasury of interest; he has a sympathetic feeling for them and the good they are to gardens. It would have been a sorry thing for agriculture if there had been no weeds. They have made us stir the soil, and stirring the soil is the foundation of good farming. Even after we have learned that crops are benefitted by the stirring of the land, we are likely to forget the lesson or to be neglectful, unless the weeds constantly remind us of it. Necessity is always the best schoolmaster; and of these necessities, weeds are among the chief.

### THE GARDENER'S HOW BOOK

With no pretense to sophistication C. C. Sherlock sets forth in this book real dirt-gardening principles discussing every phase of gardening—rock gardens, pools, annuals, perennials, trees, shrubs, vines, greenhouse construction, color combinations in the garden, and principles of landscape design.

It is likely the first book an amateur might call for at the library, yet it is astute enough for the specializing professional.

As editor of BETTER HOMES AND GARDENS for many years and later managing editor for the LADIES' HOME JOURNAL, Mr. Sherlock made replies to thousands of questions asked him as a garden expert. The SATURDAY REVIEW OF LITERATURE calls this book "an expert's round table, with Mr. Sherlock keeping order and setting forth their combined wisdom in an easily found and readily understood style."—Helen Fowler.

## FOR SPECIAL SPRING BEAUTY PLANT BULBS IN THE FALL

By HELEN FOWLER

**T**HE major bulbs and Regal lilies— The large bulbs as tulips, narcissus and hyacinths should be planted in well-prepared beds, which possess good, natural drainage and as late toward winter as the ground can be worked. In depth tulips should be planted from 8 inches to 1 foot and even much deeper, if soil is light and plantings are to be permanent; hyacinths about 7 inches deep, and narcissus a little deeper.

Lilies must have a perfectly drained situation; they like a little shade over the ground, while their flowers prefer a place where there is shade three or four hours during the day. None will grow where there is no light whatever. To take care of their preference for root protection, many plants may be used but a choice could be myrtle for the regal as the dark green foliage of the vinca matches the leaves and stem of the lily. Whatever groundcover is chosen, it should never encroach on the lily bulb. I should mention the coral lily (really lacquer-colored) as it is a great favorite and is pretty planted with meadow-rue and columbines, with a groundcover of forget-me-nots. To keep away bacteria and to help with the drainage, a handful of sand should be placed under each bulb.

Regarding the depth to plant—many follow the generally-accepted rule, that the lily bulb should be planted three times as deep in the ground as the height of the bulb. Lilies with stem roots suggest greater depth of planting but a well known lily expert writes, "they need not be planted deeper on this account as 4 inches of stem above a 2-inch bulb will be sufficient, for as the bulbs grow in size the contractile roots pull

them further down in the ground.

Generally, lilies can be planted at any time from pots but the best time to plant is when the foliage has died down and the plant is taking a rest.

Regals do exceptionally well in this section. Try to get a few in, for when July rolls 'round, you will be delighted with their jasmine fragrance and their easy association with so many plants.



*Bulbs Need Well Prepared Beds.*

There are many books on lilies in the Horticultural Library. You will enjoy reading them, for besides being a lovely flower for the garden, because of its aristocratic beauty, it has a long and interesting history. Dedicated to Juno and later to the Madonna, the lily typifies a pure white body and a golden soul. It was the companion of the rose in the bridal garland of olden days. The white lily is a symbol of purity and is used as such in Art, as in pictures of the Annunciation, and in poetry as in Tennyson's delightful "Lily Maid of Astolat."

## NEW MEMBERSHIPS

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M. W. P.


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## PARKS AND WILDERNESS

Excerpts from a talk by James Munro of Sheridan, Wyoming, at 1952 Convention of the Izaak Walton League, as reported in "Outdoor America."

**W**ITHIN the last 15 years a whole new series of efforts has been inaugurated by the Bureau of Reclamation and the Army Engineer Corps to exploit our remaining natural areas with dams. A current case with the Bureau of Reclamation, is an effort to get a foot in the door, so to speak, by building two dams within Dinosaur National Monument. If they get away with it, it will threaten our entire national park system. Both agencies continue to insist on attempting to build dams in areas which we feel should be set aside and preserved as a tiny fraction of America which we want to keep inviolate.

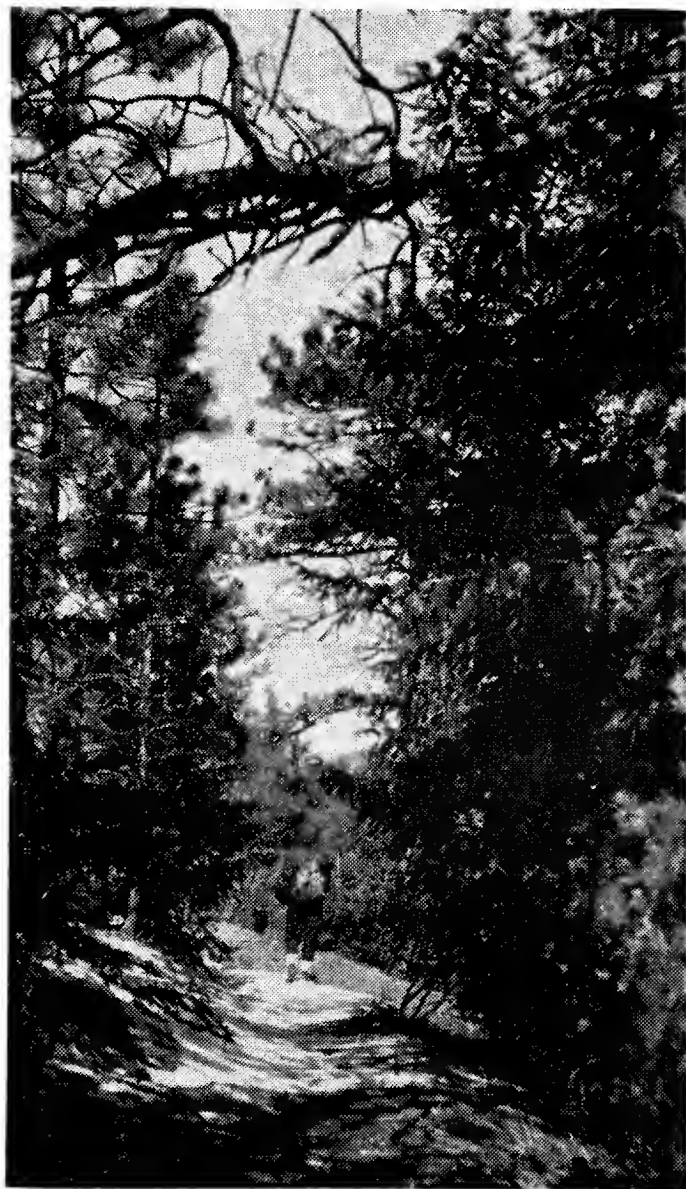
The League believes that present special use areas are none too large, if indeed, large enough for the future

needs of our people, and continues its vigorous support of regulations barring roads, resorts, cottages, lumbering or other commercial uses of established wilderness. It continues to urge the Park Service and the Forest Service to take steps to eliminate grazing, which is presently permitted on approximately half of our wilderness areas, and it opposes the landing of aircraft in wilderness areas.

The League recognizes that the time may come when, in the interest of national survival, it may be necessary to utilize certain resources within wilderness areas and parks, but that day appears to be a long way off and until it comes we must hold the line against all invasion and preserve the areas in a pristine condition.

The League strongly believes that these areas are important not only for recreation but in the interests of watershed protection. A great many of them are located in the higher mountain country and will normally stand very little grazing or lumbering operations.

We say that our country is still big enough that we can afford to keep some of it set aside inviolate for the perpetual enjoyment of the people. Some of our bright young engineers tell us we cannot keep our parks and wildernesses unless we can justify them on a dollar and cents basis. Sure. Ask the man who looks at the faded Declaration of Independence in the Library of Congress how much that parchment is worth to him. How do you value an afternoon of fishing? By the market value of the fish? In preserving our parks and wilderness we are dealing with a whole set of higher values which will pay out many times over in terms of human happiness in the years to come.





## VACATIONERS LOOK TO STATE PARKS

STATE parks, to earn extensive public use, must be vacation spots, not merely the place to go for a picnic.

Many thousands of dollars have been spent in recent years to provide cabins, group camps, tent and trailer sites and other accommodations for vacation use. States that have done this have been rewarded by heavy patronage.

John Vanderzight, director of parks for the State of Washington, found that tourists were driving through other states to reach Washington because of the sleeping facilities.

S. C. Taylor, director of Tennessee's Division of State Parks, comments in his monthly bulletin:

"If the present cost of living continues to increase, or even remains the same, the great mass of American tourists will gradually turn to state parks for much of their vacation time.

"This division recognizes this trend and is preparing to accommodate at least double the number of our present vacationists in the near future. Increasing the number of vacation cabins could never begin to satisfy their demand, therefore, this division is discussing plans for an extensive system of tent and trailer vacation areas in each of our seventeen state parks. Once this system of tent and trailer vacation areas is complete, it will encourage the public and out-of-state tourists to spend their vacations in Tennessee by making a circuit tour of our entire system of state parks."

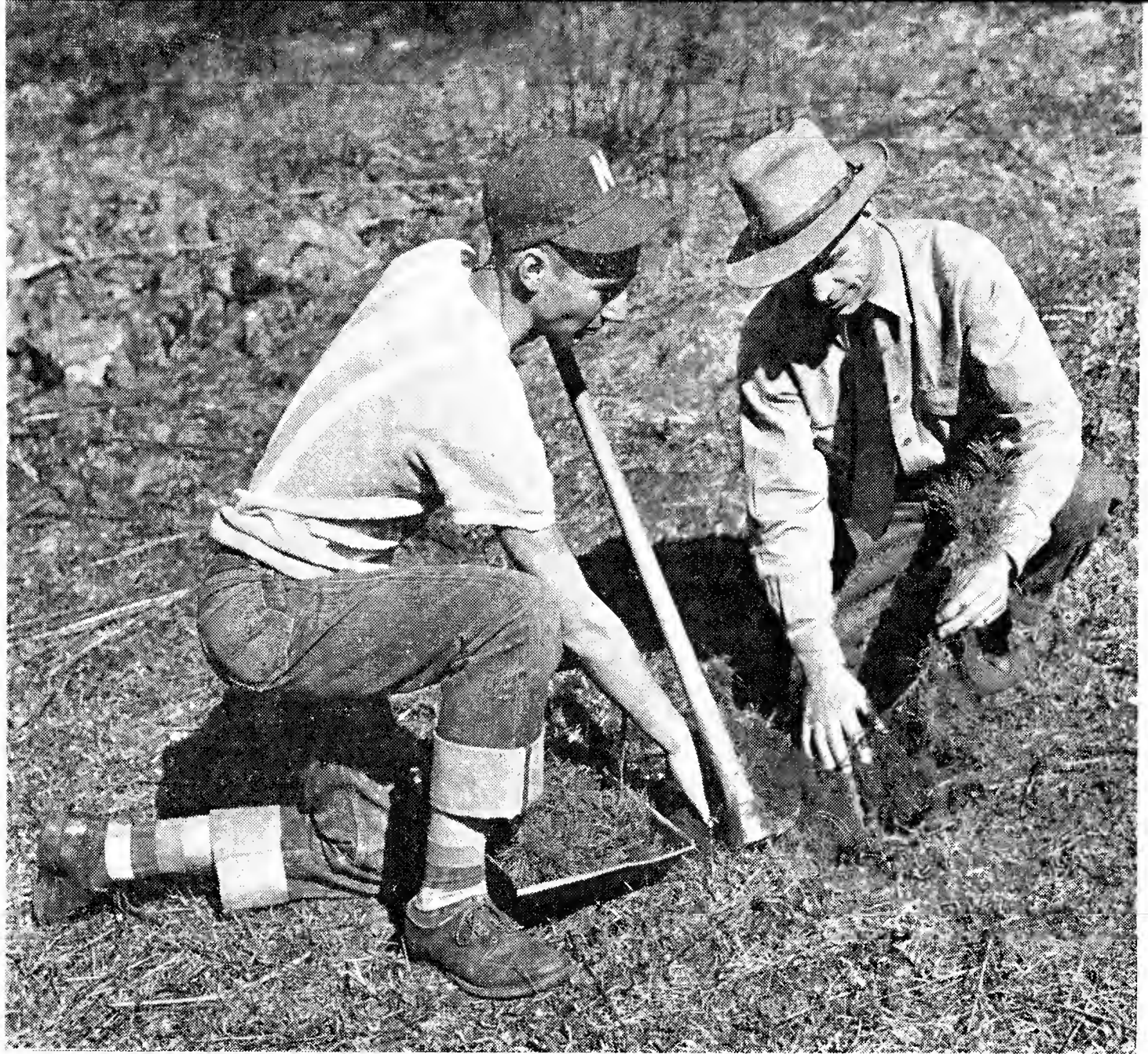
The state park had to come. America is a nation on wheels, with long weekends and paid vacations for almost everybody. The people just have to have a place to go when they fan out from our crowded cities to get into the open. Acquisitions of scenic, recreational and historic areas there-

fore represent a tremendous total of acreage in recent years. Likewise millions have been poured into development and maintenance.

Today there are more than 1,600 state parks. The public gradually has come to the realization of their existence. Discovery has led to use, and use has led to pressure for facilities.

It behooves officials who have been timid about expenditures for their state parks to recognize the trend and the public's desires. Appropriations for vacationing accommodations should not be too difficult to get, because these projects come close to being self-sustaining in the operation. That angle makes a lot of difference when tapping the public treasury.—Reprinted from "Park Maintenance," an editorial by Erik L. Madisen.





## GREEN THUMBS EVERYWHERE

We were much interested in the letter received recently from Leon Eastes, Nitro, West Virginia, where he tells about his project "Operation Green Thumb." This was carried out by his Scout troop in Nitro. The project consisted of planting some six thousand White Pine seedlings in the Monongahela National Forest. So much interest was created in this

"Operation Green Thumb" that he is now attempting to have it established over the state and in other states.

They are intending not to limit their work to simply the planting of trees in the national forests, which would be a very seasonal thing, but to be concerned about all things having to do with conservation, such as the improving of streams for fishing and the creating of game breeding parks in the national forests. Their work is being done with the cooperation and under the supervision of either the U.S. Forest Service or the Conservation Commission of West Virginia.

We need to make our conservation thinking a little more practical and do some actual conservation work. This is the sort of project that well could be done by clubs and groups all over the United States.



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## SELECT YOUR SHRUBS CAREFULLY

By HELEN FOWLER

**T**ODAY we received, through the mail from Horticulture House, a list of plants "grown or likely to be offered for sale in Colorado," with a rating as to their hardiness and desirability for growth here. This list represents an appraisal resulting from many years experience of leading horticultural organizations of the city and state. It is one of the most valuable helps, especially for the new home owner, ever to come out of Horticulture House.

But just in this abundance of dependably hardy kinds of shrubs from which he can choose lies possible danger to the gardener. Suitability-fitness should be the first touchstone to determine his choice. The front of the house is usually where the first planting of shrubs is considered. Here, even more, if possible, than in any other part of the home grounds, the shrubs should be peculiarly belonging. The main purpose may easily be forgotten, too much thought might be given to the claims of each individual shrub and harmony may be lost entirely. The question should not be whether one lists a certain shrub or whether a friend has a tall or short plant—is the shrub needed and right for this planting. It is easy to end with a confusion instead of a harmonious, appropriate dress for the base of the house.

Using too many shrubs should be carefully avoided. Close planting may be done at first and as certain shrubs grow too large they may be removed and smaller ones added. Above all do not try to cut the too-large shrub, for this will only ruin it and spoil the looks of the whole group.

In choosing the color of the shrubs, it should never be forgotten that Na-

ture likes real green. Far too many places are disfigured by an accumulation of abnormally colored plants, with striped or blotched or speckled foliage, and especially with foliage of those sickly yellow hues which in nursery catalogues are poetically called "golden". A dark blue-green should not come in contact with a light and rather yellowish-green. In general if dark foliage is used in the background and lighter foliage in the foreground, and if there is more variety of hue near the eye than farther back, the shrubbery will gain in depth, and richness of effect.

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### PASS IT ON!

YOU have benefitted from the information that you have gotten from the GREEN THUMB, so PASS IT ON to the other gardeners who would benefit. Loan your copy to your neighbors and possibly they will realize its value so they will want to become members. This is the only magazine which gives information for gardeners of the Rocky Mountain area which is adapted for their peculiar climate. Colorado Forestry & Horticulture Association is not an organization for profit and the GREEN THUMB is published at a great deal *below* actual cost. It is maintained by memberships and by gifts by those who appreciate the work we are trying to do. If we had many more members than we have now, it would cut down the individual cost of publishing the GREEN THUMB considerably, and would also get this valuable information to a larger number of people. Will you do your part in spreading the gospel of good gardening as given in the Green Thumb?



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# *The Green Thumb*

COLORADO'S GARDEN MAGAZINE

13 GARDEN  
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# The Green Thumb

Vol. 9

NOVEMBER, 1952

No. 11

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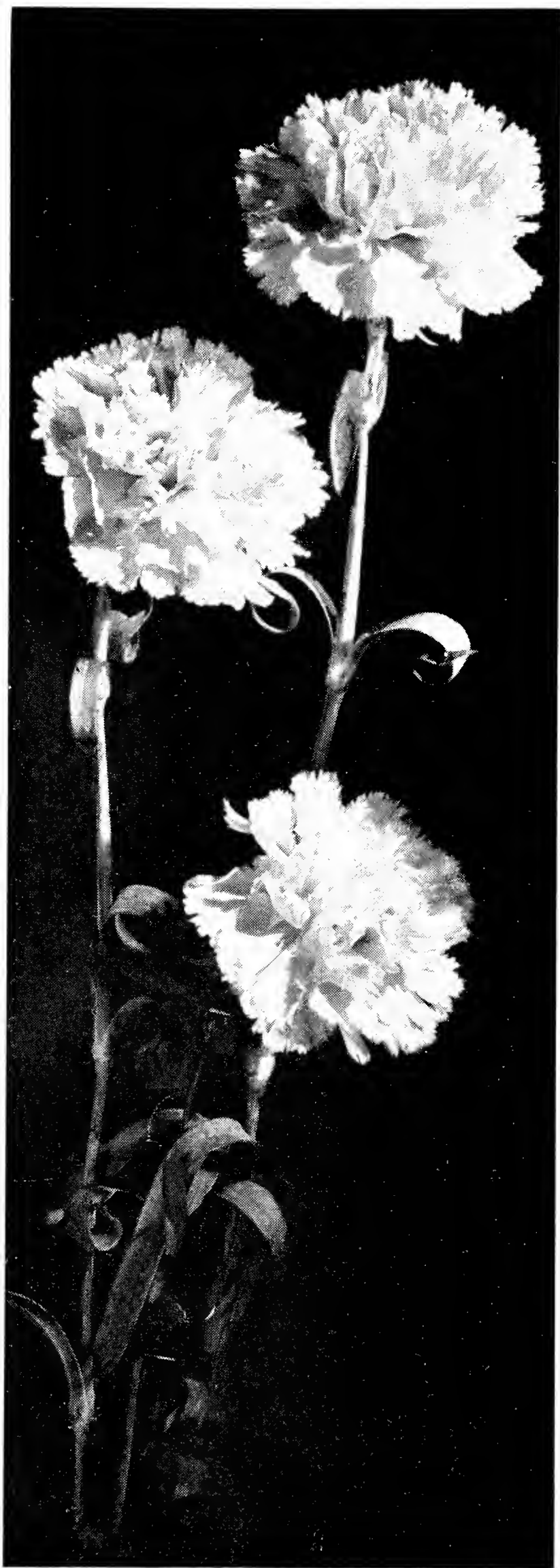
### THE COLORADO FORESTRY AND HORTICULTURE ASSOCIATION

A non-profit, privately financed Association.

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Organized in 1884

*"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."*

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 Secretary-Treasurer .....Mildred Cook  
 Editor.....George W. Kelly

## NOVEMBER SCHEDULE

The Outdoor Committee has decided to take a rest for the month of November. There will be no scheduled trips, but should there be requests for any special trip, we will try to arrange it. See the December issue for the schedule of winter hikes, snowshoe trips, ski trips, etc.

November 6. At Horticulture House, 8:00 P.M., meeting of commercial men and others in a discussion type of question and answer program on the subject "Tree Help and Labor Problems." George Stadler, City Forester, and others will be there to help.

November 12 — Wednesday night, 8:00 P.M. Organic Gardening Club will hold their regular meeting at Horticulture House. Mr. Calvin Smith will talk on "Bees—Their Habits and Uses in the Garden."

November 20, Thursday, 8 P.M., at Horticulture House. Another showing of kodachromes depicting the adventures in far lands and close by of several wandering photographers. Come and relive the summer days with these people.

## "ANTIQUES AND HORRIBLES" AUCTION GOES WELL

*Thanks to All Our Good Friends*

It was with some misgivings that we undertook to have another auction of antiques and household goods this autumn, as we realized that the attics and cellars of Denver had been under severe pressure from many angles to yield up their treasures during the past year! To our surprise and gratification, however, a nice flow of attractive and useful objects came to Horticulture House for the event which took place on Saturday afternoon, September 27th.

The auction took in for the Association about \$600 which will be a great help in furthering its work.

The list of donors is too long to give here but we are expressing a "blanket" THANK YOU—and from the heart!

The committee worked long and hard, both in collecting the material and in sorting, placing and selling it. Special thanks go to Mrs. John Evans for allotting us a storeroom, Mrs. Hugh Catherwood for soliciting donations, Mrs. Harold Klock for collecting at a distance, etc. The male members of the committee, John Swingle and Earl Sinnamon were the pillars of the affair, in setting up, auctioning—in other words—making it all possible. The Association is deeply indebted to all its perennial good friends and workers.



## LET'S SUPPOSE

### 13 Garden Steps

That you are moving into a new home this month. And that nothing has been done to the grounds around the house since the builders left.

Let's plan together what we would do to get the landscaping started. Here are thirteen steps that can be taken between now and next June.



1. Since all your garden success for the next 20 years or so depends very largely on the quality of the soil that it is planted in, let's see first what kind of soil has been left for us to begin with. I would, first of all, take a shovel and "prospect" all over the place, at least every 10 feet, and see what is found. I would dig down a foot at least, and in a few typical places I would dig two or three feet deep and see what kind of subsoil was present. If there were spots where dirt had been filled in or other places where it had been scraped off I would make a note of that. If I found buried rubbish, especially plaster and cement, I would remove it entirely, even though it might run deep into my garden budget. If necessary I would replace poor soil removed with good top soil. (Where to get it is your problem.)

2. Next I would do (or have done) the rough grading, getting the level down to within a couple of inches of the final grade wanted. I would consider making a slope away from the house of at least 1 inch in 3 feet or a little more if possible. I would plan to eliminate steep slopes where it would



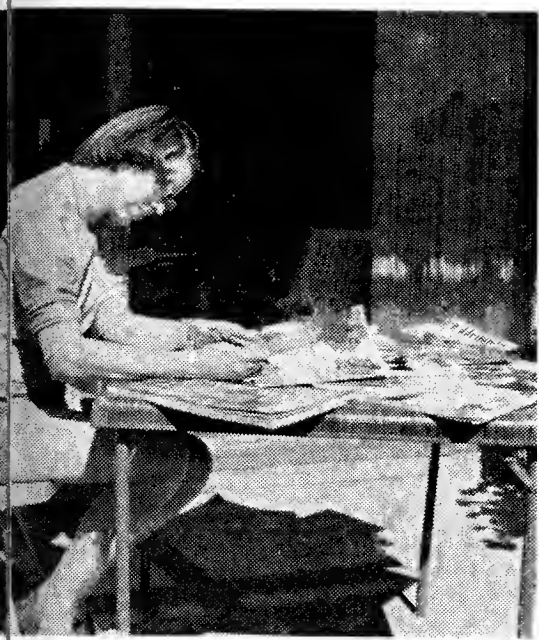
be difficult to start or mow a lawn. I would take advantage of any natural changes in grade to establish terraces, sunken gardens or raised areas which might add character to the garden. A carpenter's or surveyor's level might have to be borrowed to work out accurate grades.

3. Then I would do the most important thing in all gardening. I would work humus into the soil. I would, if at all possible, spread about an inch or two of manure, compost, mixture of peat and manure or some such material on the surface and rototill or disk it in thoroughly. This would probably go 4 to 6 inches. Then I would turn this under with spade or plow, which should put it down about 8 inches or more. Then I would put on another dressing of humus and disk or rototill that in thoroughly. This would give a bed of loose, rich soil deep enough to give all plants a good start, at least. I would leave the surface a little rough over winter so that any rain or snow would be caught and soak in. If no moisture came soon I would slowly and carefully soak, so that the soil was wet to a foot or more deep. The above could be done in the fair days until the ground froze up for winter.





*Most of these pictures posed by Mrs. Lenore Seiler.*



4. During the stormy days I would begin to plan the general features that I wanted in a garden and home grounds. Unless your memory is better than mine it would be well to put these ideas on paper. Decide what use you want to make of your grounds. Do you have room for a playground for the kids, a dog yard, a rock garden, a pool, a platform to sit on while shelling the peas and distributing gossip? I would, especially at this stage, plan where the necessary service features such as walks, drives, fences, garages, incinerators or steps would have to go. Much of the further planning would depend on the location of these service features.

5. Next I would plan, at least roughly, where the shrub plantings would go; such things as shrub screens, foundation plantings, hedges. I would take a tape measure and garden hose and lay



out the outlines of these plantings. I would put in a few stakes that would last until spring or scratch rather deep lines with the shovel so that these areas would not have to be laid out again.

6. I would carefully locate the necessary trees, considering each thoughtfully, carefully as to its purpose, its ultimate size and character, and its hardiness. I would put in stakes where I thought these should go, and as I lived with them over winter I would try to imagine that they were really trees of the sort needed and then I would move the stakes a little one way or another to make the location of the ultimate tree most effective. It is much easier to move a tree on paper than to actually move it after it is well established. I would consider their location for the benefit of their shade over the house (this would be largely on the southwest corner), for their framing (at the front corners), and their background effect (in the rear of the house). I would consider the possible need for shade over a platform or playground in the rear. I would consider their ultimate size in relation to existing overhead wires, buildings or other trees. I would plant no more trees of any kind than there was a real need for.





7. With the shrub borders, trees and fences located I would see if I could still get any of the fall bulbs and plant them in place in front of the ultimate shrub borders or in relation to the other final features, I would move in any of the perennials that were needed and that could still be obtained. Most of the perennials should be rather well dormant by this time and could be moved in, with a shovel of dirt around their roots if possible.

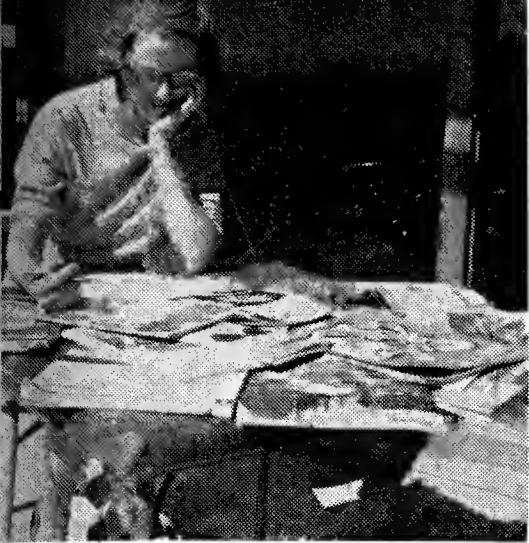
8. If the weather continues open I would attempt to move in a few of the hardier shrubs. Lilacs and some other of the hardy shrubs move well in fall if they are thoroughly dormant (have



dropped their leaves), are handled carefully and promptly, watered in thoroughly and carefully thinned or cut back. If my nurseryman wanted to assume the risk of winter damage I would move in many more things.

9. By this time it would be getting into winter and I would spend any fair days that happened along in constructing the inanimate features such as fences, walls, walks, gates, platforms, clothes lines and steps. These should be carefully planned in advance so that they would fit in the area allowed for them.





10. Between the time of open fall weather and the thaws of spring I would study garden books, visit good gardens, nurseries and parks, talk to good gardeners and then plan the balance of my grounds in detail. I would make lists of plants and other material needed and I would put this all down on paper, preferably on a plan of the place drawn up to scale. I would place definite orders for any nursery stock needed, dealing, wherever possible, with established firms who could advise me from experience (in this area) what are suitable plants to use.

11. When the frost was out of the ground (which might be any time from Feb. 1 to Mar. 30) the real fun would begin. I would plant the balance of the things I needed as fast as I could work the soil. (There are a few things like Birch trees and some of the slow growing woody plants that should wait until



May.) Whenever I could get plants dug freshly from the soil I would get those, and I would see to it that they were dug carefully with lots of roots, and I would make every effort to get them back into the soil promptly with no chance of the sun or wind drying their roots.

12. At this stage I would consider doing the thing that possibly most new home owners would want to start with—I would put in the necessary lawn areas. The soil should be well enough settled by now so that I need only till the top few inches to get enough loose soil to rake down for a good seed bed. This would eliminate the necessity of using a heavy roller at any time and make the lawn much easier to water and give the new grass a good start. I would finish the seeding with a light top dressing of humus and water carefully.



13. By this time it might be getting along about the season when it is safe to plant the annuals (June 1) and I would fill in between all the shrubs and perennials with selected annuals to give a first year effect. Then would begin the summer's routine of water-weed-spray which is another story.



# MEETING THE PLANT FAMILIES

## ONAGRACEAE: Evening-Primrose Family

By L. J. HOLLAND

THE common name for this family is certainly a misnomer, for it is in no way related to the Primrose (*Primula*.), and very few members really deserve the designation of "evening blooming." The botanical name is rather amusing; it is derived from the Greek word for the wild monkey that ranges from Iran east to Mongolia. The leaves of certain genera are supposed to bear a resemblance to the ears of the Onager. Regardless of what one may think of the name, there are some very beautiful flowers (and some pests, too), included in the group. Only about half a dozen of the three dozen genera are ordinarily cultivated. Almost totally indigenous to the New World, and of greatest occurrence in western United States, Mexico and the temperate part of South America.

OENATHERA: Evening-primrose. Some later botanists have broken this genera down into several others, *Lavauxia*, *Anogra*, *Onagra*, *Pachylophus*, as well as *Oenathera*; but I think I'll string along with Gray, it's simpler. Someone once put botanists into two classes; "Lumpers" and "Splitters," and it seems to me that the latter group are much to the front in recent years. It is high time we realized there is a happy medium, and not place a plant in a separate genus for just a very minor difference.

OE. *biennis* is listed by many seedsmen, but more likely than not, it is really OE. *lamarckiana*, a plant with larger and finer flowers. Some class the latter as a variety of the former, others class them as separate varieties. Both grow about 4 to 5 feet tall, and are remarkable for how rapidly the blossoms open. I have timed several of them and have found

that from the time the bud begins to burst until the flower is fully opened is only 25 to 50 seconds. Rather nice for a background. Biennial.

OE. *missouriensis* is a low growing, somewhat shrubby plant; an excellent subject for the rockery. The bright yellow flowers are often four inches across with calyx tube three inches long. Hardy perennial.

OE. (*Lavauxia*) *brachycarpa* is a native that is quite similar to the preceding species. Although a hardy perennial south of the Arkansas River, it is best handled here with a little protection.

OE. *hookeri* and OE. *strigosa* are two wildings that are best left as such. Both can be somewhat a nuisance, and neither have any garden value.

ANOGRA is the name given the white Evening Primrose, of which we have two species that are quite common.

A. *albicaulis* has large showy white flowers and is the more common of the two. A clump or two is rather showy in the border. Annual.

A. *coronopifolia* has smaller flowers, usually blooms a little later, and has deeply cut foliage. Decidedly less desirable than the foregoing species. Perennial.

GAURA is another member of this family that is native to Colorado. None of the half dozen species found here are considered garden subjects.

CLARKIA is a hardy annual that makes a nice bedding or border plant. C. *elegans* is the most common species, grows about 2 feet tall. The newer varieties have a nice color range.

C. *pulchella* is about half as tall; flowers lilac to white.

Clarkias are easily grown from



seed; prefer full sun and sandy loam.

**EPILOBIUM:** The rather tall plant with bright magenta flowers that is seen on burnt over areas is *E. angustifolium*, or according to later taxonomy, *Chamaenerium angustifolium*. Its habit of trying to hide the horrid scars of fire have earned it the name of **FIREWEED**, although some may know it as "Blooming Sally."

**FUCHSIA**, sometimes called "Lady's Eardrops," is a fair sample of how the popularity of plants is subject to the whims of the public. At about the time of the Civil War the Fuchsia was quite the rage, there being about 500 named varieties. Today it is not often met with except as an occasional window plant, or rarer yet, as a bedding plant. Perhaps its susceptibility to insect pests and the fact that it is very sensitive to cold had much to do with its wane as a favorite. It is the only member of the Evening Primrose family that is essentially a greenhouse subject.

All present day forms seem to be varieties or hybrids of *F. magellanica*. This species has numerous varieties, in fact, many of the varieties have been classed as species by some authors. *F. speciosa*, listed by some dealers is not a true species, but rather a hybrid of *F. magellanica* and *F. splendens*.

Fuchsias like a fairly rich soil and partial shade, when bedded out. They must not be set out until all danger of frost is past, for they are very tender. For potting I prefer a 1-1-1 mixture of loam, leafmold and sharp sand. Feed the plants once a month with liquid manure and keep a close watch for mealybugs.

As a postscript (post mortem?), it is evident that the old time cowboy gave due recognition to the Evening Primrose, as witness the song "The Dying Cowboy" wherein he says:

"Where the dewdrops fall, and the butterfly rests

"On the primrose blossom on the prairie's crest."

*Anogra albicaulis*, no doubt.

## HOW DEEP SHALL LILIES BE PLANTED

Because of the continued number of letters coming in, regarding the depth to plant Lilies, I am again subscribing to their requests.

The depth at which Lilies should be planted depends on whether they produce **ONE OF TWO SETS OF ROOTS**. Some Lilies send out fleshy perennial roots from the base of the bulb only. These do not require deep planting; twice the depth of the bulb is sufficient.

The Madonna Lily is happiest with its bulb just covered with soil—and pretty poor soil at that. (It is too late to plant the Madonnas now, August is their best time.)

The stem-rooting species, on the other hand, those that issue many fibrous roots at the base of the stem, must be planted deep enough to protect this second set of roots from injury, frost, drought and careless digging. Three and one-half times the depth of the bulb is none too deep; that is, if the bulb is two inches in diameter, there should be six to seven inches above it, at the least. Planting too shallow is the cause of the lack of success to grow the stem-rooting species. Here are some of the stem-rooters: *L. auratum*, *browni*, *croceum*, *batmanniae*, *concolor*, *elegans*, *henryi*, *philadelphicum*, *speciosum*, *regal*, *umbellatum*, *hansonii* and *tenuifolium*.

These roots are vital to the plant's health so if they are dried up or injured in any way, the result must inevitably be loss of vitality and often, finally, complete death.—H. F.

Plants cannot see, but nevertheless light is the source of power for all their energy.

# SOME "EASY TO GROW" HOUSE PLANTS

By HELEN MARSH ZEINER

**Y**OU have no luck with house plants? Then try some from this baker's dozen of "easy to grow" plants, none of which are too particular about their requirements, and with reasonable care should give you satisfaction.

1. Nephthytis—Arrowhead Plant or African Evergreen.

This plant has become popular within the last few years. It has thin, glossy arrowhead-shaped leaves. Extremely versatile and extremely hardy, it may be grown in soil or in water; as a vine or as a bushy table plant; and it is very tolerant of lack of light, hot dry air, erratic watering, and other abuses to which we subject our plants. It soon develops a large root system, but will stand being pot bound over a very long period of time.

If you want the plant as a vine, give it some support on a trellis or a moss stick, or simply let it coil around its container or along the front of your window garden. It is not suitable as a hanging vine. If you do not wish a vining plant, cut it back as soon as it begins to sprawl. It will soon send up new growth from the roots to maintain a low-growing

table plant. The portion you cut off will root readily in water to start another plant.

In sunlight, the leaves will be light green. It will grow in that sunless corner and will produce shiny, dark green leaves.

2. Aglaonema—Chinese Evergreen.

There are several varieties of Chinese Evergreen, but *Aglaonema simplex* is probably the most common and is very satisfactory. It is extremely tolerant of lack of light, and will grow in either soil or water. In my opinion, this plant is tops for that dark spot which needs a plant to make it attractive, but where nothing seems to grow. It will benefit from an occasional visit to a lighter spot, but it will tolerate a continuous existence well away from direct light. It is very slow growing. It will root from cuttings, but slowly.

3. Peperomia.

Some may say that Peperomias are not "easy to grow," but I stand in their defense. I have found them most satisfactory if you provide good drainage and do not overwater. It has been my experience that a Peperomia whose leaves become spotted and fall is simply too wet. *Peperomia obtusifolia*, the common green Peperomia with shiny, spatulate leaves, is generally the most satisfactory. It will tolerate lots of sun, but really prefers a non-sunny spot such as a north window. There it will produce larger, darker green leaves. A very sunny window may produce a plant with rather small, somewhat yellow-green leaves. Several other varieties of Peperomia are available, ranging from viney sprawlers to large-leaved upright forms. A variegated form of *P. obtusifolia* is attractive, but it will not take the abuse that its plain green relative will stand. Watermelon Be-



gonia is a *Peperomia*, but it is not as hardy as most of the others, and I do not recommend it as an "easy to grow" plant.

4. *Sansevieria*—Snake Plant,  
Mother-in-law's Tongue.

Please don't judge all *Sansevierias* by those you see in restaurants and hotel lobbies. A young, healthy *Sansevieria* is a lovely plant. When it becomes too large to be pretty, *start over*. Try *Sansevieria hahnii*, a rosette-like form with broad leaves, quite different in appearance from the long-leaved forms. *Sansevierias* will stand so much abuse and still be attractive—they deserve a place among your house plants.

5. *Crassula*—Jade Plant.

I think that young jade plants are much more attractive than old, woody, tree-like forms, but this is merely a matter of opinion. Many of you will find the old plants more artistic. If you prefer the young plants, maintain them by cuttings; if you wish to have the large, tree form, please repot it occasionally and keep it healthy, so that it puts out plump green leaves instead of the stunted, unattractive leaves we see on too many old jade plants. Jade plants will grow in a variety of conditions, and seem to have no certain specifications.

6. *Philodendron*—Devil's Ivy.

As a hardy vine, the common *Philodendron cordatum* with its heart-shaped leaves will always be a leader. It can be grown in soil or water and does not have to have direct sunlight. It is not subject to red spider which plagues English Ivy. It does have the habit of dropping its lower leaves and leaving an expanse of bare stem. When this happens, make a cutting and start over. The cuttings will root easily in water. If you have room, try some of the large-leaved *Philodendrons*, such as the "Split Leaf."

7. *Pothos* or *Scindapsus*—

Variegated Devil's Ivy.

Commonly called variegated *Philodendron*, this vine is very similar to *Philodendron* in appearance, habits, and care. Green and white leaves add variety to the window garden.

8. *Tradescantia*—Wandering Jew.

These viney plants are often overlooked, but they are easily grown in soil or water and make attractive additions to the house plant collection. The purple and silver varieties are the most colorful and attractive. Under favorable conditions they may bloom, producing a small purplish flower. Since *Tradescantias* root very readily, it is easy to keep a supply of young plants and discard "leggy" plants which have lost their leaves and become straggly.

9. *Hedera*—English Ivy.

Perhaps I should not include the English Ivies in this list, but I find them very satisfactory and very easy to grow. Nine out of ten of the complaints which reach me are of red spider. Red spider can be prevented by frequent washing of the plants. I feel that a good washing at least once a week is essential for English Ivy. In addition to this, don't put them on the hot, dry, and probably dark mantle where conditions are ideal for red spider to develop. Keep them near a window where they get plenty of light, wash them frequently, and I see no reason why you can't grow English Ivy.

10. *Impatiens*—Sultana.

This is an old-fashioned flowering plant which I think should be used more. Pinch it back when it is young to keep it from growing too tall, give it sun, plenty of water with good drainage, and the little pink flowers will keep coming all winter. In the spring, set it in your border and it will keep right on blooming. Start new cuttings for fall.

## 11. Coleus—Foliage Plant.

Everyone knows these plants with their great varieties of colors and forms. They are easy to grow if you will remember to prune them back to make them bushy, and do not give them too much water. Dropping leaves or spotted leaves usually indicate too much water or poor drainage. Watch for mealy bug—those specks of white "cotton" in the axils of the leaves. A bit of alcohol applied with a toothpick is an easy remedy.

## 12. Iresine—Foliage Plant.

This is an old-fashioned plant with red leaves. It likes plenty of water. Like Coleus, it needs to be pinched back to keep it bushy. It provides an

interesting spot of color where flowering plants will not grow.

## 13. Oxalis.

The little pink or white-flowered Oxalis is another old-fashioned plant which blooms freely with little care. Its clover-like leaves are attractive even when the plant is not in flower. If the stems are too long and straggly, give the plant more light. However, too much sun and heat from glass may cause the leaves to yellow. Experiment for locations, and be rewarded by the quantities of small pink or white flowers which the plant will produce. Warning! They do close up when the sun goes down—but the leaves are still pretty.

## STRENGTHEN TREES AGAINST STORM DAMAGE

**N**O LIVING shade tree is immune to storm damage. Put enough strain on a branch and it will break, *no matter what the tree species may be*. And the season of the year is approaching when such strains, in the form of wind, ice and snow storms, can be expected.

Certainly, providing artificial support and additional strength for the crowns of all trees is not economically feasible, nor is it necessary. No such course of action is recommended. But there are many cases where, at relatively slight cost, serious damage to a fine shade tree can be prevented by the installation of a system of cables and braces.

To any person experienced in tree care, conditions conducive to damage from storms are easily discernible. Certain species and varieties of shade trees have inherently weak wood fibers which cannot withstand severe strains; some develop branches with tight, V-shaped crotches. Such crotches are weak, for although the branches

may be closely appressed one to the other, or with the trunk, at the crotch, actual union of wood tissues is prevented by the layer of bark that covers each of the two stems. This bark remains in place even though the two stems, due to increase in diameter, become very closely appressed and, to all outward appearances, joined tightly together. Influenced by shade and other factors, some trees develop long pendulous branches which are of small diameter in proportion to their length and weight. There is constant danger of such branches breaking under the weight of snow and ice accumulations.

Not all branch breakage, by any means, can be prevented by cabling and bracing. But, unquestionably, properly installed cables do give the branches extra strength to resist the strains and stresses imposed by storms, and may add years of useful life to the tree.—Reprinted from the September, 1952, issue of *Shade Tree Digest* as presented by the Swingle Tree Surgery Company.



## "IS THIS HORTICULTURE HOUSE?"

"MAY I GET SOME INFORMATION, PLEASE?"

Q. Must you keep your hose out the year round to water plants?

A. Plants must be watered when they are dry, whether that be April, August or October. It is well to hold off the water a little in October or in the fall until the frosts come, to help them ripen up. After that, before the ground freezes up, everything should be given a thorough soaking, and if the weather remains open, for several weeks after this time, they should be given another soaking, even though that is along in December or January or February. Of course, it is no use to water on frozen ground because it will not sink down or do any good.

Q. Does the shrub, weigelia, grow here?

A. Sometimes, in favorable conditions, they do grow here, though they are considered as a borderline thing. Out in open areas where the sun and the wind would hit them fully, I doubt that there is little chance of their surviving a winter, but where you can give them a little protection, such as on the east side of the house, they are a fairly good gamble.

Q. Are delphiniums hardy here?

A. Yes, delphiniums are quite hardy over most of our area and well up into the mountains. In fact, up in the mountains, quite a ways, they grow to an enormous height sometimes. In the East, the authorities recommend giving them lime, but out here, we usually have enough lime in our soil, and that is probably one reason that they like it here.

Q. When should I prune my evergreens, trees, and shrubs?

A. One oldtimer answered this question by saying "When your knife is sharp." Though there are some exceptions to that rule. Most shrubs

should have the bulk of their pruning done right after they bloom so that they will have a full eleven months or so to form the twigs and buds for next year's bloom. Evergreens are usually trimmed only a little at a time, and usually at the time they are growing. It is best not to cut back severely at any time, especially in late fall. Trees may have emergency pruning done on them at most any time. Exceptions are the maples, walnuts, and birches which are usually trimmed while they are in leaf so they will not bleed excessively.

Q. Why doesn't hemlock grow in this country?

A. Hemlock is one of the evergreens that does not like our country here. One of the reasons, is our alkaline soil. Mainly, it is our hot, dry weather during winter, which dries them out and causes them to winter burn.

Q. What raspberries are hardy here? And how do you take care of them?

A. Most of the single season raspberries require a great deal of work and must be put down and covered up each fall if you expect to have a good spring crop. Most home gardeners are now depending almost entirely on the everbearing red raspberries, primarily the one called Indian Summer. If this one is watered right, it pretty well takes care of itself. It will give a good summer crop, and fall crop and you can let it die down, and not expect a spring crop.

Q. In preparing flower beds, how far out do you remove brick and mortar?

A. The farther the better, if you expect good flowers to grow in the bed. Many of the perennials have their roots reaching out two or three

feet and if they encounter this rubbish they are not likely to like it. The most profitable time and expense you can spend is in preparing the beds for flowers and lawns, and whatever other plants you are planting.

Q. When should lawns be rolled?

A. In my opinion, the only time to roll the lawn is just before it is planted, and the only purpose of this is to find the soft spots so that they will not sink after the lawn is seeded and has been watered. After this, work up the surface of the soil again and I would not roll it after that. It is sometimes advisable to roll lightly a lawn which has developed small irregularities, but you must be very careful to have just the right amount of moisture in the lawn at this time, and not too heavy a roller. When the ground is too wet and the roller is so heavy that it squishes ground out in front of it, that is doing more harm than good. A great deal of damage has been done by excessive rolling of lawns, and makes it necessary to develop this new system of spiking, to allow holes in the lawn where water and fertilizer can go down.

Q. Can crocus and other small bulbs be planted in the fall at the same time that you plant tulips, jonquils, and hyacinths?

A. Yes, these are fall bulbs which should be put in, in the fall, and will bloom in the spring.

Q. Should you fertilize your lawn in the fall?

A. There is much difference of opinion about this. It depends very largely on the type of fertilizer used and the quantity used. I certainly would not stimulate the lawn overly much by putting on heavy applications of quick acting fertilizer in the fall, though, light applications of organic fertilizers would act as a mulch and would leach in their chemical value over the winter, and would

probably do a considerable amount of good. Most of the fertilizing I would recommend to be put on in the spring.

Q. When you are wrapping your trees for winter protection, how far up would you go?

A. I would wrap them up as far as the main trunk is exposed, maybe, beyond a few of the lower limbs. Most of the winter burn is usually toward the bottom part of the trunk where the sun has full chance to reflect on the ground or the snow.

Q. When is the best time to plant maples, blue spruce and other evergreens, and birch trees?

A. Some of the hardier things may be safely transplanted in the fall, but most of the evergreens are much safer when moved in the spring. Then, they do not have to go through the hot dry winter with the sun shining on them and drying them up. This is also true of most of the slower growing trees such as hard maples and oak. Birch is one exception. The only time that this can really be safely transplanted is just as the buds begin to break, which is usually along the middle of May.

Q. Can you transplant tamarix, strawberries and fruit trees now?

A. Tamarix is difficult to transplant at the best. It is much better to move it in the spring, and then, to insure its growing, it should be cut down almost to the ground. Sometimes cuttings from tamarix will grow more readily than the old rooted plant. *Strawberries* may be moved at anytime that the new plants are suitable and the weather is good, but if moved in fall they would have to have good care over winter, if they survive, so it would be better, probably, to move them in the spring. In any case whether they have been moved or not, they should be well mulched over winter. Most *fruit trees* would stand a much better show of surviving if they were moved in the

spring, as they are rather difficult to move and seldom have a good root system. There is always the chance that they might dry up over winter when they are planted in the fall.

Q. What can you do about squirrels?

A. If you are in the city where you can't shoot them, you will either have to learn to trap them or learn to love them.

Q. When frost hits the roses before they are entirely dormant, in the fall, can you cover them at that time?

A. It is very seldom that roses are dormant at the time of the first frost. Sometimes they go for several months, into December, before they lose their leaves, so it is always a question as to just when to cover them or wrap or hill them up with dirt to protect them over winter. It is not necessary or good for them to start this hilling when they are still in full leaf and blooming, so I suggest gradually filling some dirt around them, and then, along later in the season, when they are thoroughly dormant, to put the balance of the six or eight inch hills around each plant. By that time the ground may be frozen up around them so that you will probably have to have some dirt from some other place which has been protected from freezing to bring in.

Q. How can I correct alkaline conditions in my soil?

A. This is a problem we have over much of the mountain and high plains area. In small places we can add something to counteract the alkalinity such as, iron sulfate or aluminum sulfate. We can add humus, which in its decaying will help to correct a little of the alkalinity. We can provide better drainage, which will not allow the alkali to accumulate so much. We can grow deep rooted crops which will absorb some of this alkali. We can water more carefully

so as not to leave the ground soggy at any time. In general, if the soil is not too alkaline, we can help it considerably by adding some of the acidifying materials, and keeping it well drained.

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### COLORADO'S FIRST TREE FARM

A farm's crop is generally thought of as consisting of such things as wheat, corn, beets, and similar edible items. Trees can be cropped under the proper system, and a "Tree Farm" is this novel kind of crop producing. Properly managed it produces good income.

A 3,200-acre woodland tract in Larimer County is Colorado's first Tree Farm getting a Tree Farm Certificate. Manager S. A. Tait of Broderick Wood Products, owning and leasing this Tree Farm, has an intensive tree-cropping program in action. Young growth is protected, brush scattered, fires suppressed. Stumps are cut short, all cutting is done on a thinning basis. Some of the sawed lumber is treated.

Wyoming's first Tree Farm is in Carbon County. It is a 240-acre tract, owned by N. A. Swanson, coal and woodland operator.—M. W. P.

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### RUNNING OUT OF COMMON NAMES?

Dr. Benjamin Blackburn, in "Trees and Shrubs in Eastern North America," has suggested many translations from Japanese colloquial names. And Professor M. L. Fernald in the 8th edition of Gray's Manual of Botany supplies a rich fund of French-Canadian names.—M. W. P.

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Should THE POINT OF UNION of a grafted or budded plant be above the ground, or below? Usually below; in case of dwarf fruit trees above.

M. W. P.



## HOME OF

The pictures shown on the  
of Mrs. Hubert Work, 4100 S. th

*Above: Entrance to the grounds. The drive runs between two lines of large trees a half mile from University Blvd. to the house.*

*Below: Interesting old Chinese lantern made of stone which sets under the trees in the garden.*



*The trunks of cottonwood trees framing*

*Pictures on following page show the garden to the west, and the small pool shaded by*





# THE LOVER

pages are of the home and grounds  
University Boulevard.



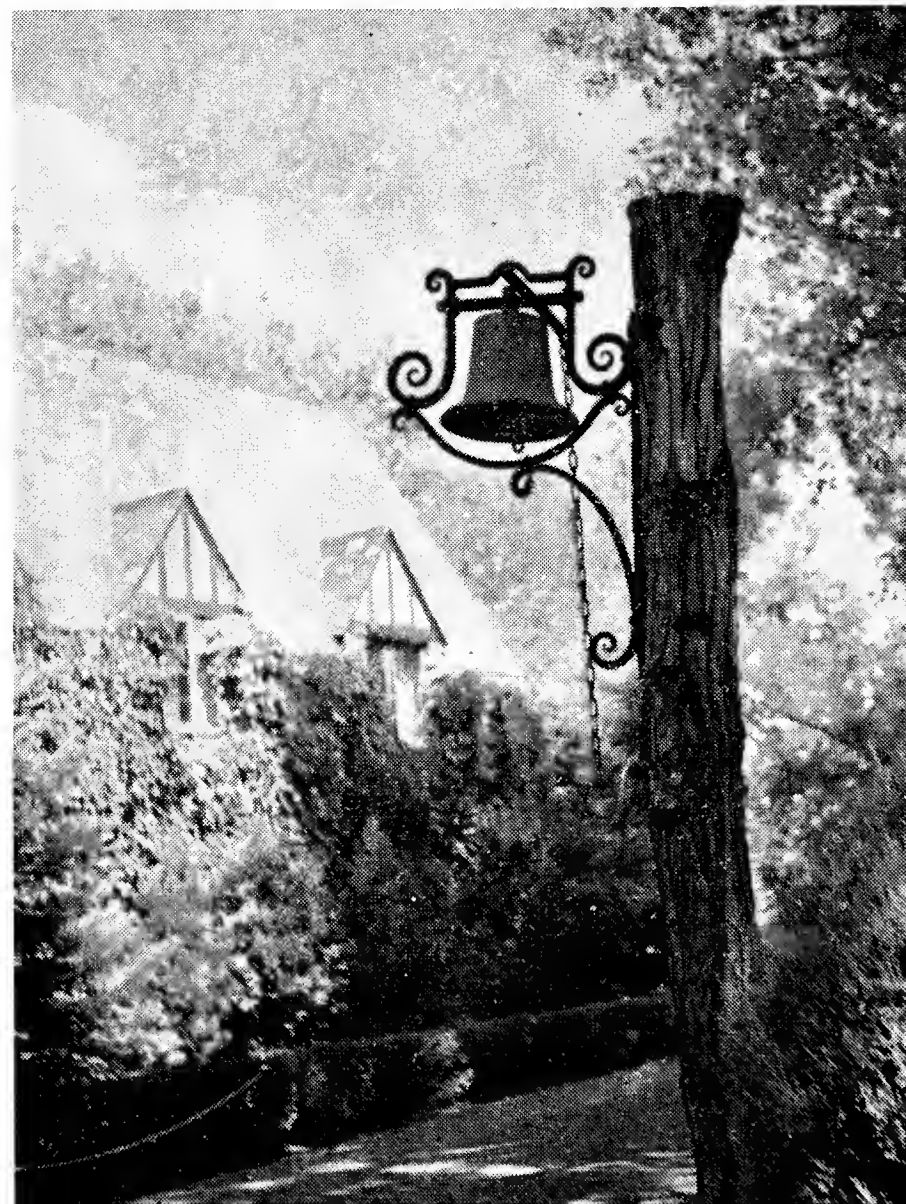
pure of the mountains in the distance.

o cottonwoods bordering the lawn on



*Above: Upper end of the drive, at the house.*

*Below: The bell, across the drive from entrance to the house.*







# YOUR TREES DESERVE GOOD CARE

By CHARLES M. DRAGE

**H**EALTHY trees and shrubs resist winter injury, insect and disease injury. A tree weakened by winter injury is highly susceptible to attacks by insects or diseases; the secondary attack may kill the tree or shrub.

Hardiness is a variable factor and many climates may occur in the same yard. The soil condition and the location of the plant in relation to other plants, buildings, walks, drives and fences create these many different climates in the same yard. Plant health or vitality may be more important than actual degrees of cold.

In Colorado broad-leaf trees and shrubs are planted as soon as the ground can be worked in the spring. To insure future vitality the ground should be thoroughly prepared and fertilized in the fall previous to planting. Large amounts of well-rotted barnyard manure, compost, leafmold and peat moss should be plowed or spaded into the soil in the fall. The amount to apply will depend upon the condition of the soil. The organic fertilizer should be supplemented by adding 3 to 5 pounds of superphosphate or a complete low-analysis fertilizer to each 100 square feet of soil.

When possible, rapid wood-growth should be prevented in late summer. Water and all nitrogen fertilizers should be withheld so that wood will ripen. After growth has practically ceased and before the ground freezes, a thorough irrigation is in order. With an ideal soil and ideal preparation winter watering will be unnecessary even in very dry winters.

Plant food deficiencies for established trees and shrubs will not likely occur in well-maintained lawns or in borders where mulches of well-rotted stable manure, compost or leafmold are used. This, of course, depends

upon the kind and condition of soil when the original plantings were made. The order in which deficiencies are most likely to occur are nitrogen, phosphoric acid and certain minor elements. Nitrogen can be supplied quite easily because it is readily soluble and can soak into the soil and contact the tree roots. Phosphate is difficult to supply because it will not move more than two or three inches in the soil and may never come in contact with the feeding roots. The punchbar or jet method can be used successfully, and for complete feedings it is desirable to call on an arborist or tree surgeon who has the equipment and experience to do a job which will bring results.

## A PERSISTENT ALIBI

Because, it is said, the proposals for Split Mountain and Echo Park reservoirs would not flood out the dinosaur remains, it is concluded by many proponents of the Upper Colorado Development that no damage would be done to the Monument by the reservoirs. The Monument constitutes one of the fine scenic and scientific areas in the United States which have been given protection and those who believe in the high service of the System of National Parks and National Monuments which have been created, hold that it would be sacrilege to permit these invasions. General Grant has made a careful study of the U. S. Reclamation Bureau and he is convinced that alternate sites are available which will develop adequate water projects for the Upper Colorado region and permit the delivery of water to New Mexico, Arizona and California as prescribed in the Inter-State Agreement.—Editorial Comment from Planning and Civic Comment.



## SEED PANELS

By MARGARET HORNE

**S**OON, it will be snowing and the evenings will be longer. When you have to be in the house, why not make one of the panel pictures using seed pods?

The panels are shingles, cut into any size. Plywood or paneling, also, cherry, walnut and other woods may be used. The wood can be aged by rubbing with a solution of turpentine and linseed oil or it can be stained with oil paint—green, white or pink, and the paint rubbed off before it is dry. It can be stained a dark oak or green and a contrasting color of seeds can be used.

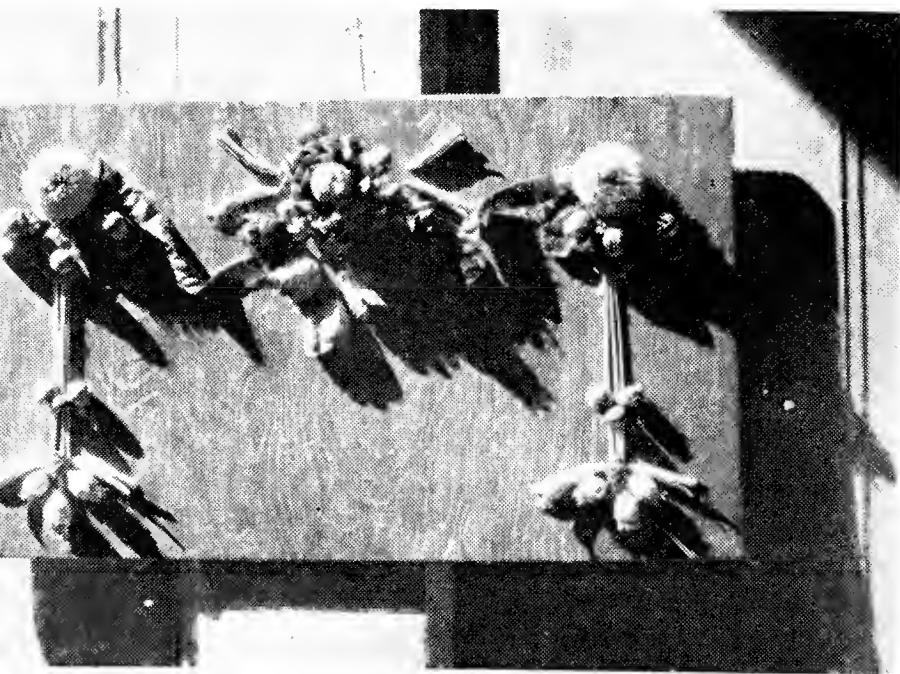
As to design—it can be a conventional pattern or a basket using half a seed pod, such as a trumpet vine or milkweed seed placed horizontally, filled with flowers which are different shaped seeds, such as lilac or little aster seed vessels. It could be a spray design. A panel of all cones is very pretty using pieces cut from either end or sections of the pine cones. Pine cones, fir, spruce or pinion cones may be used for different textures. Before the seeds are cemented on the panel with Duco, the panel is sanded on one side and all the edges. The seeds are weighted down with small

stones or small plastic bags of sand. Part of the seeds may have to be put on, weighted and allowed to dry, then the rest added. If a curved stem or seed pod is desired soak it in water for a while, shape and anchor it until dry, and then proceed as above.

After the cement is thoroughly dry, a coating of colorless shellac is applied with a brush to the entire panel, seeds and all; or if you want to use the newer plastic sprays, that is all right, too. Then, a gummed picture hanger is placed on the back to hang it on the wall.

Now, as to the material to gather—there is still lots of time this fall to gather the material. Go into the garden and see if you have left a few seed pods of iris, black-eyed susan, shasta daisies, poppies or lilacs. Go to the mountains, if possible, and gather a few cones, acorns, sandburrs, evening primroses, sunflowers, and any other weed seeds that seem to be firm. Milkweed pods and yucca are very essential. Also, around home or in the park you can find pods from the honeylocust tree, trumpet vine, catalpa, okra, sweetpea, besides all the individual seeds of melon, sunflower, mustard and many others. Many kinds of nuts are used, too. Butterflies and insects to hover over the design, can be made with sunflower seed wings and bodies of a small catkin or seed. Bittersweet, juniper, kinikinnick berries or other small berries can be used for a bit of color, but they must be shellacked when fresh or they will dry up.

It is interesting to hunt for different varieties of seed pods to use and then design into an original panel. Try one and be delighted with the picture you have created from nature—and see how the time has flown!







### DO YOU WANT TO HELP?

We have asked our directors to supply material for the December number of the GREEN THUMB. This should be an interesting number.

During 1953, we are planning to ask outlying communities over the state to supply material for at least every other issue.

We will start with Jefferson County where our greatest number of members (outside of Denver) live. Mrs. Vella Hood Conrad will coordinate the material from this area, but each member in Wheatridge, Arvada, Lakewood, Golden or other communities should take it as his responsibility to tell us of good gardens, that could be photographed and written up, and of experts who can write.

Will other communities let us know what issue they would prefer to take, and let's see which will be the most interesting and valuable issue next year. We plan to select judges to appraise these and will give suitable recognition to the winner.

Don't YOU want to help?

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The American Association of Nurserymen reports that all plants and trees sold by nurserymen are absolutely guaranteed to contain chlorophyll.

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Trees on your property divert winds, set up mild eddies in the surrounding air. According to the American Association of Nurserymen, even a few trees properly placed can make a great difference in your comfort.

## SUCCESSION OF BLOOM IN THE WINDOW GARDEN

By ROSE TUGGLE

**D**URING the long winter months nothing cheers one up so much and makes the day so bright as a window full of lovely plants in bloom. By planning ahead now we may have blossoms all winter long.

For a Thanksgiving window arrangement use the Christmas cactus as the center of interest. This plant should be brought indoors in early September, placed in a cool room or porch that has strong light or sun during the morning. Give it some fertilizer and water regularly. When buds begin to form the plant needs plenty of sunlight. Geranium cuttings that have been potted during the spring or summer should be in bloom now. Geraniums that were left in pots and set outside last spring will be in full bloom now; these should be brought indoors in September, if they are not too large. After the old plants are through blooming they can be taken to the basement or into a cool frost-proof room. Withhold water until February or March, then cut the tops down severely and set outside when the weather permits. The slips or cuttings started last June are best for winter blooming and are not as large as the old plants.

Many annuals make beautiful and charming plants for the window for a while. These, of course, were taken in before frost. When they fade, stop blooming, or get leggy it is time to discard them for something more desirable. Red salvia is a striking and colorful plant. Double petunia, which must be trimmed or tied on a short trellis, low-growing snapdragons, ageratum, lobelia, midget zinnia and other small plants will bloom nicely indoors for several months. When an-

nuals are lifted they must be handled very carefully. Use pots large enough to accommodate the roots and lift with as much soil as possible, set in a shady place outside and keep moist for a week or two before bringing indoors to the window. Late flowering chrysanthemums also are beautiful. This pot, too, should be large enough and the same directions as given for annuals apply. When the mums have finished blooming set them in a very cool place and water just enough to keep them from wilting. Sometimes if cut down, they will send up new growth and bloom again. The bright colored coleus can be started in water. Plant in medium sized pots and set in a very sunny place. In a short time, it will make a bright spot among the other plants. Window plants should be turned daily to make them symmetrical and shapely.

Now for the Christmas window. In November place narcissi bulbs on a layer of pebbles which have been put in red planters or bowls. The bowls should be rather deep for good root growth. Water should be kept just around the lower third of the bulbs. As growth develops, after two or three weeks in a dark, cool place, more pebbles should be added to support the rooted plants. Later move them to a light room where the yellow spears turn green. Blooms appear within six to eight weeks. Do not submerge bulbs in water or they refuse to bloom. Keep them out of drafts and do not set on radiators. Temperatures of sixty or seventy degrees are best for good bloom. Excessive high and dry heat will blast buds. The centerpiece for Christmas will be the poinsettia. Around it will be

many varieties of begonias, kalanchoes, African violets, amaryllis and foliage plants such as sedums, holly, ferns, philodendron, Chinese evergreen and others.

Orange trees can be grown from seed and make nice plants to set on the floor at the side of the plant stand. Soak seeds in warm water until they swell, plant in a three-inch pot of light sandy soil. Set in a warm place to germinate and transplant to a five or six-inch pot of good garden soil. They need a sunny window. By February they must be rested in a cool place. Water occasionally to prevent drying out completely.

For sunny windows there are all kinds of cacti. The Christmas cactus will bloom again after it has been resting from the Thanksgiving blooming. After it is through blooming withhold water gradually, set in a cool place for three or four weeks, then bring into a warm room, increase water, give mild fertilizer and by Christmas or soon after it should bloom again. It will do this again in a month or six weeks if the same method as described above is followed. After that it must be allowed to rest until next fall. Freesias and carnations will also grow in a sunny window.

For a north window there are ferns, in variety, baby's tears, sultana, monstera, begonia, peperomia, philodendron, sansevieria. African violets will grow in north windows but do not bloom so freely. An east window is better.

For the St. Valentine's window we can have more hyacinths. These must be started in fall spacing the plantings two or more weeks apart for different seasons of bloom. Many bulbs may be used in this manner. Geraniums should be in bloom yet. They may need some pruning and fertilizer. Begonias will need the

same treatment. Wax begonias are always lovely but need constant pruning to encourage the steady formation of bloom.

The Easter window should include the beautiful Easter lily, lily-of-the-valley, tulips, hyacinths, calla lilies, and again the old standby—geraniums. By planting yellow tulips in green or ivory pots, red geraniums in green pots, etc., one can make a very attractive window arrangement. By placing on the floor such tall plants as orange trees or oleander and using vines to frame the sides of the window you will have a fine picture.

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At no time during the life of the tree can we consider its pruning needs completed. While the frequency of attention may be lengthened as the tree grows to maturity we will need to return periodically to carry out good practices of tree sanitation. This may be limited to the removal of a few dead limbs which have died due to the lack of sufficient light or it may be to repaint old wounds which have not completely healed from previous pruning operations.—Taken from "The Cultural Development of Roadside Trees," by E. C. Eckert, Chief Forester, Michigan State Highway Department, Lansing, Michigan.

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The effect of vegetation on climate of an area has been demonstrated in Tennessee. In one partly deforested area, the temperature is  $2\frac{1}{2}$  to 3 degrees hotter than a forested area nearby; wind velocities are 80 per cent less in the forested as compared to the denuded area, according to the American Association of Nurserymen.

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The leaf of a plant is the only form of life that can make organic food out of sunlight, air, water, and the salts of the earth.

## ROSE NOTES

By VELLA HOOD CONRAD

FALL is the ideal time to prepare the soil for next year's rose garden. Choose a spot with at least a half a day of full sun, away from competing roots of trees and shrubs. Hybrid teas are temperamental about this. They seem to do so much better in beds alone, and I have had certain varieties that act almost human in their reaction and choice of the spot they prefer in the bed.

I am still picking buds by the dozen (October 4, 1952) and they are lovely, high-centered buds with color intensity far superior to this spring's. After September's display, my roses have earned almost any special attention they demand.

At one time, I felt that the only correct way to prepare a rose bed was to dig out the soil to a depth of at least two feet; layer with about four inches of cow manure in the bottom and replace the soil mixed with humus. This is not necessary.

It is necessary to determine your drainage conditions. Roses will not tolerate water standing around their roots.

After choosing your spot and determining your drainage conditions, spread on the bed well-rotted cow manure at a ratio of about a bushel of manure to ten bushels of soil, and spade under deeply. Peatmoss and humus are added at this time, too, as there are very few gardens in this area that will not benefit from the addition of peat and humus. Do not rake this down but leave in the rough, so that it will gather and retain the winter moisture.

Roses do prefer heavier soils, but roses will grow in any soil that will grow a tomato. Sunlight and drainage first are considerations; the soil we can prepare, and with a minimum of correct care we will be rewarded with lovely roses.

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Much of the highway travel in the United States is for pleasure and recreation with many sections dependent upon this source of income. Roadside trees aid in making the trip safer, more relaxing and more enjoyable. The ideal comment should be, "What a pleasant drive, it's hard to believe we have been driving all day."

Roadside trees can be used in many ways to make the trip safer and more enjoyable. Trees are used to frame and focus our attention on pleasing distant scenes of forests, water, mountains and well cultivated fields. Undesirable views can be screened from the traveler by trees which at the same time add beauty and shade to the highway.—From Department of Land and Water Conservation, Michigan State College, by Professor Karl Dressel.





## HOO DUZZIT!!!

Mrs. Charlotte Barbour by Sue Kelly

In the September issue we started something! From the meager response we had to the over 2000 questionnaires we included in that number (by the way, what happened to yours?) we gathered that most of you liked our little stories and we want to keep up with some little information about each of our directors (in time!) and those who help us so very generously with their time and efforts.

Mrs. "B."—as we know her best—is quite an expert—in raising funds—as witness our last "Antiques" Auction, September 27!! Her brain-child, it brings in quite a bit for the operation of Horticulture House, and we want to say "Thank you" for that. She and her committee and friends have been indefatigable workers.

At one time, Mrs. "B." was city forester and later assistant city forester to Mr. Earl Sinnamon, and is now working with the city forester's office in the Public School System organizing junior forester groups. We think anyone who is a director at Colorado Forestry and Horticulture Association has a full time job doing just that, but—this young lady is on several boards, The Dumb Friends Leagues among them, and there, too,

donates time and effort. Where do they get all this energy and time?

I did say "Thanks, Mrs. "B.", didn't I?



*Mrs. Charlotte Barbour*

We still are picking up the refuse on the shoulders. Publicity seems to increase this problem. We wonder when the public will prefer their money spent for more permanent betterments and will finally stop using the highway as their dump.—From North Carolina State Highway by Frank H. Brant, Landscape Engineer.

"When it comes to the preservation of historic monuments, parks and wilderness areas, I think the safest rule is to be overly zealous to preserve them. There will always be interests which will want to shrink the boundaries, and reduce the proportions of our great parks and playgrounds."—From a talk given by Senator Clinton P. Anderson, at hearing on Gila Wilderness Area.



## LIBRARY DONORS

September, 1952

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## CHEMISTRY OF THE SOIL

Cation exchange in soils by Dr. Walter P. Kelley.

One of a series of chemical monographs, this very scholarly volume deals with one of the most important points of soil behavior—H. F.

## "MODERN GARDENING"

By DR. P. P. PIRONE

As Reviewed by  
PATRICIA WHARFIELD

In the Helen Fowler Library there is a new book entitled: "Modern Gardening," by Dr. P. P. Pirone, pathologist of the New York Botanical Garden. In this book, he shows how to feed plants through their leaves, slow down growth of shrubs and trees, spray weeds to death, speed up growth of vegetables and flowers and beat the insects. It is the first complete guide to the miracle drugs chemistry has developed for the commercial farmer and for the backyard gardener.

The author is the outstanding American authority in this field, and contained through the pages of this book, are the answers to some five hundred questions most often asked of Dr. Pirone. Many of the practices which he describes, are the result of vast experience and the products of his experiments.

For the increasing number of gardeners who have the urge to gain more knowledge of plant and shrub life, and wish to find the joy and fulfillment to be derived from producing healthy, beautiful gardens, this book will be of inestimable value. With additional knowledge comes additional satisfactions and greater perfection is our goal.

This morning we received a copy of "My Great Oak Tree and Other Poems," by Liberty Hyde Bailey, bound in a beautiful paper folder. With it came the information that copies of this lovely work were available, free, on request, from the Chronica Botanica Co., Waltham, Mass. For those of you who know and love these poems, this will be welcome information.

## IF YOU CAN HAVE BUT ONE GARDEN BOOK, THEN THIS IS IT

Norman Taylor's *ENCYCLOPEDIA OF GARDENING*, published by Houghton Mifflin, Boston, at a new low price. Gardeners who are acquainted with the first edition have come to regard it the very best as a quick, informative and useful garden book. This second book is out under the name of *ENCYCLOPEDIA OF GARDENING*. There can be no question of the excellence of Mr. Taylor's second but smaller edition. A Gold Medal was given to the first edition, and its continued use by gardeners everywhere is even better testimony of its great value. It has been rechecked and expanded by 1000 new entries, with clear and accurate information on multitudes of questions not found in the first edition.—H. F.

## PROPAGATION HANDBOOK

Propagation of trees, shrubs and conifers, by W. G. Sheat.

The author is an expert of the Royal Botanic Gardens at Kew. This book gives, simply and practically, essential information, in an encyclopedic style, about woody plant propagation. Not only are familiar plants discussed, but also material seldom seen. Careful attention is given to various difficulties likely to be met. This book can hardly be expected to make a propagator of a beginner overnight, but it will be a great help, to all who are interested in the fascinating job of increasing plants.—H. F.

"If all men were gardeners there would be no wars" is the apt opening quotation in *FLOWERS FROM OLD GARDENS*, the charming anthology issued by the Trovillion Press. The scope of the book is wide and far-reaching—ranging from the gardens of King Solomon to Thoreau.

## KANSAS WILD FLOWERS

By W. C. STEVENS

Although there are many volumes in our Horticultural Library on Wild Flowers, all very fine, this is one of the best that has come off American presses in many years. Not only does it discuss Kansas Flora but also flora growing over many states. One reviewer writes, "It satisfies the highly technical requirements of the systematic botanist and, at the same time, it has a rich appeal to the amateur wild flower student."—H. F.

The wilderness did more than heal my lungs. While it dwarfed me by its immensity and made me conscious of my insignificance, yet it made me aware of the importance of being an individual, capable of thinking and feeling not what was expected of me, but only what my own reasoning told me was true. It taught me fortitude and self-reliance, and with its tranquility it bestowed upon me something which would sustain me as long as I lived: a sense of the freshness and wonder which life in natural surroundings daily brings and a joy in the freedom and beauty and peace that exist in a world apart from human beings.—From "The Healing Woods" a book on wilderness therapy by Martha Reben.

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In SOIL, SAND or WATER

Simply dissolve and water all your houseplants, garden flowers, vegetables, shrubs, lawn. Produces more and larger flowers and fruit. Excellent for seedlings, cuttings, transplants. Clean, odorless. Won't burn foliage or roots if used as directed. Contains all nutritional elements—plus vitamin B1. Feeds instantly.



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### CORDAGE

THE most common material used for cordage over this mountain area in ancient times was the Yucca or soapweed leaves. Cliff dwellings which may be from 600 to 6000 years old contain scraps of yucca which are still tied in knots either as natural leaves or as rope made from the pounded fiber. A refinement of this use was in the feather cloth woven with fine bird feathers and yucca fiber.

It is still useful for tying things together, though it has never been used commercially as hemp or sisal has.

Other plants growing here which produce good fiber for cordage include the Indian Hemp, which has a tough long fiber bark, and the familiar Stinging Nettle.

Those who have passed a childhood in the Central East will remember how harness and all manner of things were repaired with hickory bark and how rope was temporarily made of grapevines.

Tall grass may be twisted into quite usable rope.

Those who spend much time out in the wild places learn to carry a little coil of strong cord for the many uses it has around camp, but it is quite possible to get material on the ground to use for emergency repairs or to construct simple camp furniture.

### APPRECIATION FROM ORGANIC CLUB

In behalf of the Organic Gardening Club of Denver, I wish to thank you (Mr. Fred Johnson) and your fellow officers of Colorado Forestry and Horticulture Association for the privilege of holding our August meeting at Horticulture House. It was indeed a pleasure as well as a privilege.

At this meeting the membership voted unanimously to take a \$25.00 membership for our club, in your organization. At this same meeting there were six of our members who expressed their desire to become members of your association.

These, along with a number of others who are already members of Colorado Forestry and Horticulture, make a substantial percentage of our membership also members of your organization.

We know that Horticulture House with its fine library and wonderful atmosphere would be valuable to us and we hope to be of some value to it.

LEROY C. HARDING,  
President.







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## New Memberships Received September and October, 1952

Mrs. Dana Carpenter, 2072 S. Bannock, Denver  
 Mrs. William S. Iliff, Jr., 4421 38th St. North, Arlington, Virginia.  
 Mr. Nelson R. Van Ullen, 4395 Reed, Wheatridge  
 Mr. Donald E. Clark, 5090 W. 6th Ave., Denver  
 Col. Carroll D. Buck, 1057 Race St., Denver  
 Organic Gardening Club of Denver and Englewood, Mr. LeRoy Harding, Pres., 4650 Quitman St., Denver  
 Wallace Mineral Corporation, 170 W. Virginia Ave., Denver  
 Mrs. Ray D. Gilbert, 310 W. Cedar St., Lamar, Colo.  
 Mr. Wilmer B. Clement, 4181 Everett, Wheatridge  
 Mrs. R. J. Savage, 323 Clermont St., Denver  
 Mrs. Frank Holzfaster, Paxton, Nebraska  
 Mrs. Charles B. Dixon, 908 4th Ave., N. W., Great Falls, Montana  
 Mrs. William Hakenson, 13 9th St., N. W., Great Falls, Montana  
 Mr. Carl F. Ohman, 802 24th St., Golden, Colo.  
 Mrs. Freeman Scheunemann, Holyoke, Colo.  
 Mr. J. D. Buckley, 301 Jersey St., Denver  
 Mrs. David M. Frazier, 1195 S. Elm St., Denver  
 Mrs. John J. Pels, 8200 W. Alameda Ave., Denver 14  
 Mr. S. L. Heacock, 1140 Dahlia, Denver 20  
 Mrs. D. M. Dunham, 4340 Otis, Wheatridge  
 Mr. and Mrs. E. W. Eskridge, 3216 S. Elm, Denver  
 Mrs. Fred E. Moore, 201 Galapago, Denver  
 Jane L. Rudnick, 660 Clermont, Denver  
 Mrs. A. F. Vorpahl, Yoder, Wyoming  
 Mr. C. R. Neal, 1265 Quari, Aurora, Colo.

Trees winter by having less moisture in their limbs and by a greater concentration of sugar in the moisture that is retained, according to the American Association of Nurserymen. If extremely low temperatures should occur during the time the tree was full of sap, in many cases it would explode due to the formation of ice in its cells.

### Imported Fall Bulbs from Holland

Evergreen Decorations  
Grave Blankets

POTTERY AND INDOOR  
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Complete line of dish gardens, plants,  
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## CONFLICTING LAND AND WATER USES

Multiple-use water projects, it is claimed, have solved many controversies by combining power, reclamation and flood control, though it is apparent that there must be some accommodation by each use to the combined uses. Irrigation may draw down reservoirs when power demands would indicate high-water levels and flood control may indicate low-water levels to provide for quick storage capacity in times of flood.

But the preservation of lakes and streams in national parks is not compatible with any of these economic water uses. The preservation of selected natural scenery is an indication of a high-state of cultural attainment, though those who cannot see and distinguish the difference between artificial reservoirs and natural lakes are often led to advocate encroachments on national parks and monuments which by Acts of Congress are protected from such man-made modifications.

Frequently proposals for dams and reservoirs in national parks are made solely or principally on the ground that the park sites are cheaper to develop when the Federally-owned land is appropriated without compensation. Of course there is no money compensation which would justify artificial infringements in national parks and monuments. Generally in the national forests, which are roughly ten times as extensive as national parks and monuments, or in the public domain, alternate sites may appropriately be developed for feasible multiple-purpose water projects.

But, by all means, let us keep our national parks and monuments free from the very developments they were created to avoid.—Editorial comment from Planning and Civic Comment.

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### IMPORTED BULBS

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Crocus*

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*Complete Garden Supplies*

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## DEEP WATERING FOR TREES

**I**T IS a prevalent fallacy that sprinkling a lawn sufficiently to keep the grass in excellent growing condition during a drought period, also provides an adequate supply of water to trees standing in the turf area. Actually, little or none of the small quantity of water generally applied in lawn sprinkling ever reaches the tree roots. It is either absorbed by the grass, or passed back into the atmosphere through the processes of evaporation.

Grass plants possess an astonishingly large root system. It has been estimated that a single rye plant may develop, in one season, a total root length of 387 miles and an additional 6603 miles of root hairs! H. J. Dittmer, in his "A Comparative Study of the Subterranean Members of Three Field Grasses," states that in one cubic inch of soil Kentucky blue grass may develop 4000 lineal feet of root growth! Competent authorities have also said that for every pound of above-ground dry matter produced by grass crops, 200 to 500 or more pounds of water are required by the plants, not including that lost through runoff, drainage and evaporation.

Soil conservationists have stated that water losses through evaporation are confined largely to the surface few inches of soil regardless of the total depth of penetration; that in a given soil a 1-inch application of water might be held entirely in the upper 5 inches from which most of it could evaporate within one week. And seldom, indeed, is the equivalent of a 1-inch rainfall applied in sprinkling a lawn! Place a jar or tin can with vertical sides in the pathway of the spray of water as it falls from the normal operation of a sprinkler; then measure the depth of the water ac-

cumulated in the container when you think it is time to move the sprinkler to a different location in the lawn. We venture you will be surprised at the small amount of water your lawn receives in normal sprinkling.

Most of the feeding and water-absorbing roots of trees are deeper in the soil than are those of grass plants; many are below the surface 5 inches of soil from which the greatest amount of evaporation occurs. *Water that fails to penetrate to the roots obviously is of no benefit to the tree.* If a drought extends over a sufficiently long period of time to affect the tree, it is clearly apparent that water must be applied in some manner other than ordinary lawn sprinkling.

A sprinkler can be used, of course, provided it is allowed to operate long enough to discharge the quantity of water required. Or, the nozzle can be removed from the hose and water allowed to flow slowly upon the soil over the root spread. Perhaps still better, purchase from any horticultural supply dealer an irrigating soil "needle," attach it to the hose and thrust it into the soil to a depth of 12 to 14 inches in the root zone. In this manner water can be put exactly where it is most needed. *Whatever method of irrigation is used, it must be remembered that the soil should be kept moist but not extremely wet.* The easiest way to determine whether or not the soil is properly moist is to take earth samples from the root zone with a soil auger or narrow spade.—Reprinted from the September, 1952, issue of Shade Tree Digest as presented by the Swingle Tree Surgery Company.

---

*Objection to Trees:* "Their leaves rattle at night and keep me awake." Reported by an Ohio City Forester.



# FALL PLANTING TIME IS HERE!

We have a full selection of SHRUBS, CERTAIN EVERGREENS and SHADE TREES that can be successfully moved in the autumn after the leaves have fallen.

**Tulips, Narcissus, Fall Chrysanthemums**  
*A Large Selection of All of Them*

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*We Suggest at this Season*



- Careful Spraying
- Proper Pruning

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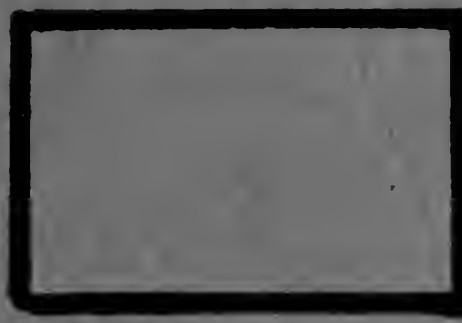
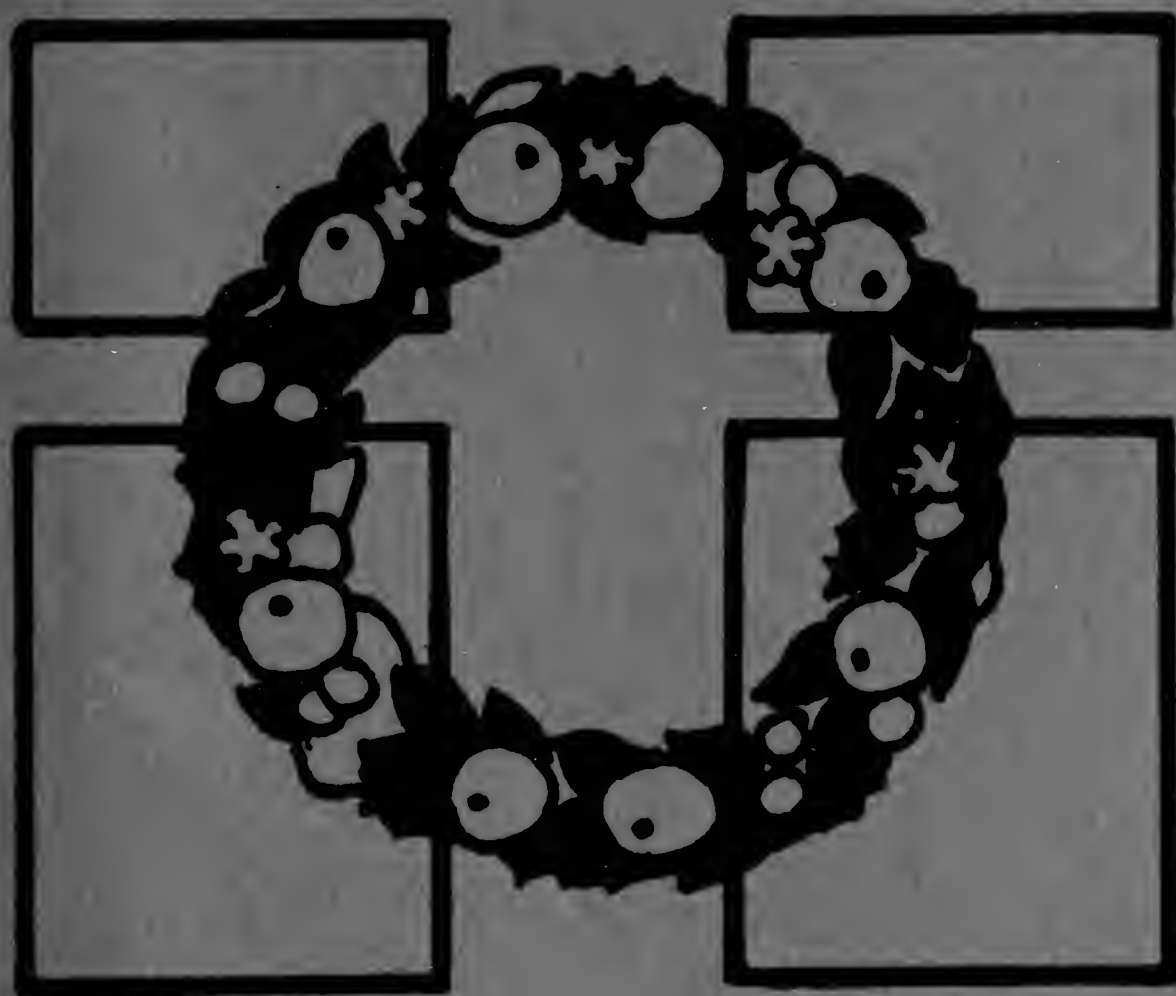


December, 1952

25 Cents

# *The Green Thumb*

COLORADO'S GARDEN MAGAZINE



NOEL



On the next few pages appears the first edition of our "Shopper's Guide." We hope, in succeeding months, to enlarge this section of the Green Thumb and to help introduce you to some of the most interesting shops and reliable merchants in the city.

But the "Shopper's Guide" will not be a success unless we have your support. All of you will do Christmas shopping this month. Why don't you do part of it, at least, with our advertisers? *And tell them you saw their ad in "The Green Thumb."* (And why don't you tell your favorite merchants about the selected and unusually desirable market they would reach by advertising in the "Green Thumb?")



Nowhere but nowhere except at the **MARCO POLO GALLERIES** can you find such a selection of distinctively beautiful lamps in such perfect taste and at such reasonable prices. The Classic, Traditional, Far Eastern are all represented. Also there is a large variety of vases available to be made into lamps, and you may select an interesting imported fabric so that we can design and make custom made shades for them.

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## Do You Have a Friend Who Has a New Home or a Garden

or even a lawn and a few trees

*Then for Christmas give him a copy of*

### "ROCKY MOUNTAIN HORTICULTURE IS DIFFERENT"

Written for gardeners in this area by George W. Kelly. It will tell them what to plant for every purpose, How to prepare soil, how to arrange plantings, How to control pests, how to water, and what to do to keep their plants happy every month of the year.

Price only \$1.50, at all book stores, or order direct and postpaid from  
The Green Thumb Council, 1355 Bannock St., Denver 4, Colo.



For the gardener's Christmas present . . . wrought iron plant stands (pictured is our 13.95 special) planter lamps, solid brass planters. . . . And for his holiday decorations we have Christmas trees of every size and shape, evergreen boughs, roping, holly, mistletoe, pine cones. Also pottery, potted plants, grave blankets, wall frames and pockets.

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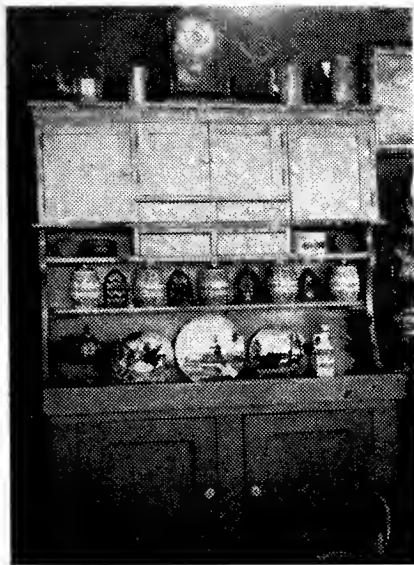


What Better  
Christmas Gift  
for That Gardener  
Friend,  
Than a Membership  
in the Association

*(Which includes the*  
**Green Thumb**  
*for 12 months)*

If You Will  
Send in  
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Promptly  
It Will Save Us  
Time and Money.  
Use the Attached  
Blank.

*Thank You*



An old hand pegged pine Pennsylvania Dutch cupboard and dry sink holds rare Meissen, Delft, coffee grinder, copper, brass, and new pewter. Open the doors and find scarce fruit and flower prints for the unusual Christmas gift. This blend of the antique and the new adds up to "Home Sweet Home" in our contemporary scene.

## PONY EXPRESS SHOP

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Denver

DExter 0916

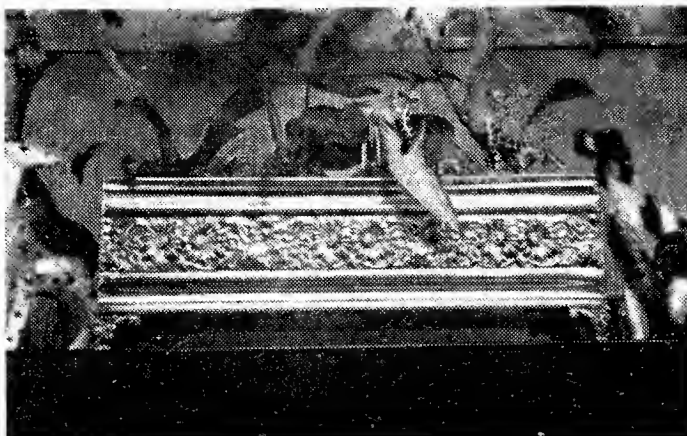
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Architect of The Appetite



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Blooming plants for home and conservatory make most appreciated Christmas gifts.

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NEW, EXQUISITE

## Genuine Haeger Pottery

Complete line of dish gardens, plants, and planter supplies.

## THE NEW GARDEN SHOP

MRS. L. B. SHELBY, Manager

# Swingle Tree Surgery Company

*extends*

## Christmas Greetings and Best Wishes

*for*

## A Happy New Year



## Merry Christmas

and

## Happy New Year

*from*

# W. W. Wilmore Nurseries

38th and Wadsworth

Wheatridge

Glendale 4737



# The Green Thumb

Vol. 9

**DECEMBER, 1952**

No. 12

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*Drawing on front cover suggested by Mrs. Chas. Enos and made by Mrs. Anne Arneill Mueller.*

GEORGE W. KELLY.....*Editor*      MRS. HELEN FOWLER.....*Librarian*  
ALICE FOULK DALBEY...*Editorial and Adv. Asst.*      MRS. R. H. HUGHES.....*Asst. Librarian*  
MR. AND MRS. E. O. COOK, *Custodians*

Published Monthly. Sent free to all members of the Association. Supporting membership, 3.00; Sustaining, \$5.00; Contributing, \$10.00; Patron, \$25.00; Donor, \$100.00. Copyright, 1952 by:

## THE COLORADO FORESTRY AND HORTICULTURE ASSOCIATION

**A non-profit, privately financed Association.**

**1355 Bannock Street**

## Denver 4, Colorado

**TAbor 3410**

## Every Gardener Can Help

Misleading advertising of horticultural products has become so common that it is time every good gardener protested. Everyone with garden experience should know that he can not get something for nothing, but the new gardeners are misled by questionable advertising and are spending their hard-earned garden dollars foolishly.

Anyone should realize that an offer to send a large number of plants or bulbs for a price far below that asked by local dealers must be questioned.

Honest advertising of plants and bulbs should give the correct name, should give their proper size and age, should describe the plant correctly as to its ultimate size and character and should, above all, indicate in what areas it is likely to be hardy. National advertisers seldom take into consideration our peculiar climate.

Customers should not accept plants which have been so inadequately packed that they arrive dead or damaged.

The established and reliable nurserymen do not try to mislead people by vague references to remarkable "new" plants and you will find that members of The American Association of Nurserymen will make an effort to see that their customers get what they want at a fair price and in good condition.

Every good gardener, especially members of garden clubs, should take it as his responsibility to the thousands of new and inexperienced gardeners, to protest to the firms and the newspapers or magazines who carry their ads, where these standards of good horticultural advertising are not maintained. When you see another misleading, vague, incomplete or "cheap" advertisement of plants or bulbs, sit right down and write two letters of protest.

## DO YOU KNOW . . .

That it costs the Association \$3.25 to print and mail the Green Thumb to each member, and that the total costs of the Association's work, distributed among its membership, amounts to \$8.40 each. That is a lot to get for a minimum membership of \$3.00. If it were not for extra money-making projects and the outright gifts it is obvious that we could not continue to operate. We still keep the minimum membership low to allow more people to benefit from our services, but more members should voluntarily take out the higher memberships and help us to balance our budget. We are thankful to those who have consistently taken out advertising, who have taken out higher memberships, who have made gifts, and especially those like Daisy Hastings, Charlotte Barbour, John Swingle, Vella Conrad and Helen Fowler who have managed money-raising benefits and have continually boosted the Association to their neighbors.

What Have YOU Done to help the Association?

There are 10,000 people in the area who need our help and need someone to tell them of the work we are doing. If we had 10,000 members we could get profitable advertising in the Green Thumb, which would make it self-supporting, and it could also be made more timely and appropriate. Tell the folks in your block about the Association and the Green Thumb. Give at least one membership for a Christmas gift to someone with a new garden.

You can also help greatly by using the enclosed blank and renewing promptly if your membership runs out with December. This will save much work and expense of sending further notices.



### Colorado Forestry and Horticulture Association

Organized in 1884

*"To preserve the natural beauty of Colorado; to protect the forests; to encourage proper maintenance and additional planting of trees, shrubs and gardens; to make available correct information regarding forestry, horticultural practices and plants best suited to the climate; and to coordinate the knowledge and experience of foresters, horticulturists and gardeners for their mutual benefit."*

#### OFFICERS

President.....Fred R. Johnson  
Honorary President.....Mrs. John Evans  
Vice-Presidents—Mrs. A. L. Barbour, Mrs. Robert Perry, Mrs. Geo. H. Garrey, Milton J. Keegan, S. R. DeBoer, Dr. Moras Shubert.  
Secretary-Treasurer .....Mildred Cook  
Editor.....George W. Kelly

## DECEMBER SCHEDULE

Dec. 4., Thursday, 7:30 P.M., at Evans School, 11th and Acoma. Kodachromes of Pakistan, with story by G. D. Pickford of his trip to this ancient land. We can learn much about conserving our own soil and forests by these examples of destruction. Mr. Pickford is Supervisor of the Routt National Forest and was sent to Pakistan to advise with officials there.

Dec. 7, Sunday. Leave Horticulture House, 8 A.M. Annual trip to see the Rocky Mountain Sheep in the Tarryall mountains. Driving distance about 250 miles depending on route. Walking optional, as sometimes they may be seen from the cars. Always an interesting trip. Register early so that transportation can be arranged.

Dec. 10, Wednesday, 8 P.M., at Horticulture House. Regular meeting of the Organic Garden Club. Come and get acquainted with this enthusiastic group of gardeners.

Dec. 11, Thursday evening, 8 P.M., at Horticulture House. "Tree Maintenance Problems" Discussions for commercial tree men and home owners.

Dec. 14. Sunday. Trip to Jones Pass Area by snowshoe or hiking, depending on weather. Distance about 5 miles. Register early at TA 3410 or PE 0797.

Dec. 31, Wednesday evening, night and Thursday A.M., Jan. 1. Annual trip to Devil's Head lookout to watch the fireworks on Pikes Peak. It may be cold, but there will be warm shelter arranged to start from, and this is always a thrilling trip, for those who can take it.



## MEET OUR DIRECTORS

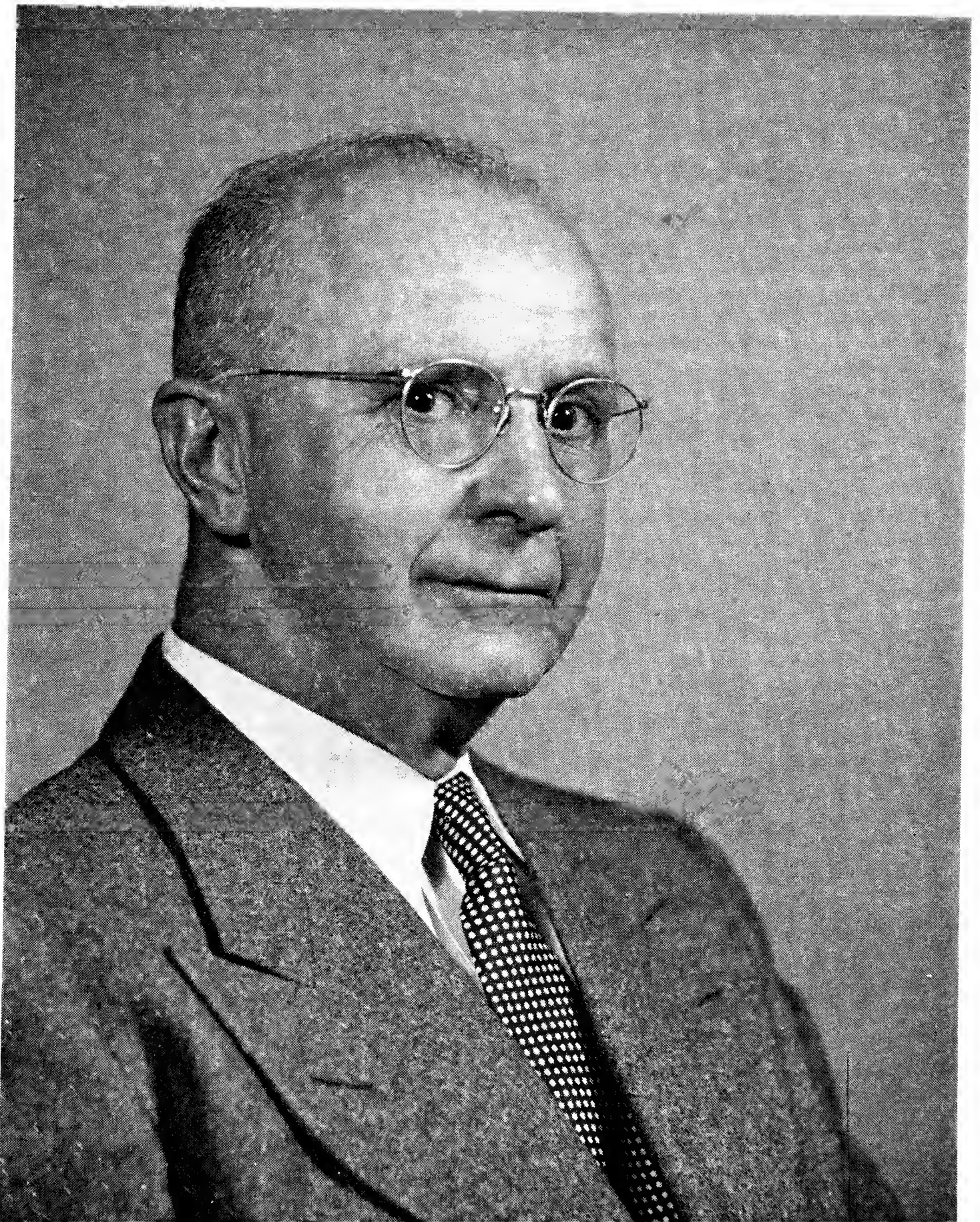
This month we have asked our directors to furnish stories, pictures and advertising for the Green Thumb. They have responded with a great variety of material, which is natural coming from a great variety of people. If "Variety is the spice of life" this should be a very spicy issue. We hope that you will appreciate getting acquainted with our directors through their contributions here.

We are going ahead with our plans for regional issues of the Green

Thumb next year. Will you give us your preferences and suggestions?

We have in this issue several new advertisers. Studying these ads should help you to find the garden equipment and gifts that you need. Tell them that you saw their ad here and it will help us get more ads.

Why not show this issue to a friend or neighbor who might benefit from the information contained and might want to take out a membership and receive the Green Thumb each month.





**FRED R. JOHNSON**

## OUR ASSOCIATION LEADS IN CONSERVATION

COLORADO has been a forest minded state for many years because of the lessons learned in the early settlement of the state. As the early day miners prospected through the mountains and developed their mines and processing techniques, large quantities of timber were used. The evidences of this are still noticeable around Leadville, Kokomo, Aspen, and other mining centers. Timber for mine shafts, tunnels and buildings and immense quantities for charcoal used in the smelting process resulted in denuded hillsides. Forest fires burned for weeks and little or no effort was made to control them.

As a result of this devastation, miners were concerned over the source of timber supply for their future mining operations. As agriculture developed, especially in the plains region east of the mountains, farmers become more and more concerned over a continuous and plentiful supply of water.

This feeling resulted in the inclusion of a clause in the constitution adopted by the State of Colorado upon its admission to statehood in 1876, requiring the enactment of laws to prevent the destruction of forests and to keep them in good preservation. Colorado was the only state at that time which had such a clause in its constitution. This was due largely to the efforts of Frederick J. Ebert, pioneer citizen and one of the founders of the Colorado State Forestry Association.

This Association, which was organized November 19, 1884, was the leader in the movement for the protection and administration of the forests of the state. Soon after its formation it succeeded in securing

the enactment of legislation providing for the establishment of the office of State Forest Commissioner and Colonel Edgar T. Ensign was appointed the first forest commissioner.

The Association urged the Congress to pass a law providing for the establishment of forest reserves. Such legislation was enacted on March 3, 1891. On March 16, 1891, President Benjamin Harrison set aside the White River Plateau Timberland Reserve, now known as the White River National Forest.

It is interesting to note that the Association appointed a committee in December, 1893, "to secure legislation preventing waste of young trees which are needlessly sacrificed during the Christmas season." Need we say that this battle still continues!

In 1903 the record shows that the Association offered prizes to school children to further their efforts in tree planting.

Here is a quotation from the Denver Republican of December 27, 1893, which tells more adequately than can this present day writer of the work of the Association.

"For years the Colorado State Forestry Association has been unselfishly laboring in a cause which should command the universal and hearty support of our people. Of the various economic questions affecting this commonwealth, that of the conservation of its mountain forests is one of the foremost. Upon the perpetuity of our native forests depend the mountain streams and water for our vast irrigation systems. The proverb, 'the forest waters the farm,' has special significance here. Agriculture, horticulture and kindred industries could not exist in this semi-arid region in

the absence of forests, which attract, gather and distribute the moisture.

"The State Forestry Association has, during the last ten years, greatly furthered the creation of a just public opinion relating to forest reform. It has promoted useful legislation in that behalf, both state and national. It is largely responsible for the establishment, under the proclamation of the President, of the great forest reserves of the western mountain region."

And now some sixty years later what is the situation and what is the Association doing? Eleven National Forests in Colorado with a net area of 13,693,000 acres—quite a sizeable forest in answer to the dreams of those pioneer conservationists of the last two decades of the nineteenth century.

In 1885 the consumption of lumber in Colorado was estimated at 120,000,000 board feet, and about two-thirds of which was cut in the state. In 1942, according to the Bureau of Census figures, 439,000,000 board feet of lumber was used in Colorado, of which 378,000,000 feet was shipped in and 61,000,000 feet was produced locally. Mr. Thomas Schomburg, lumber advisor for the Rocky Mountain States for the War Production Board, who furnished these figures, also estimated that the forests of Colorado could produce from 150,000,000 to 200,000,000 board feet of lumber annually on a sustained yield basis. This would depend largely on how well the forests are managed and protected from fire and destructive insects like the spruce bark beetle.

Colorado's forests do not suffer from fires as much now as in the early days of settlement. According to the records of the U. S. Forest Service the total area burned within the National Forests from 1909, when

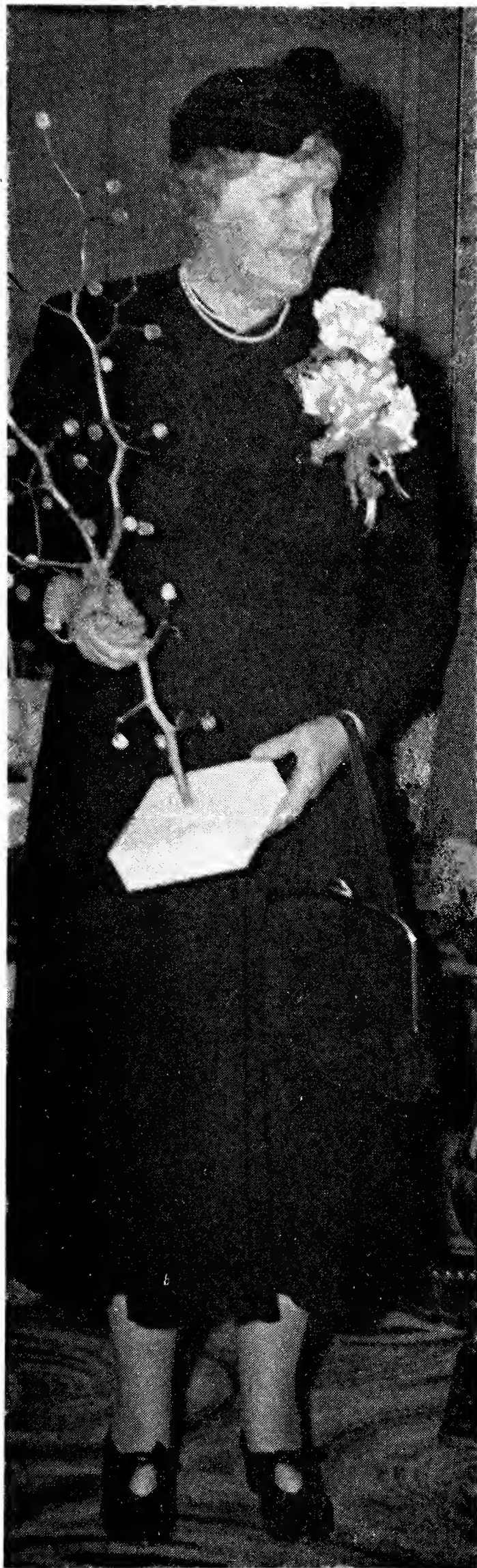
organized fire protection and records were first started, through 1951, totaled 45,588 acres, or about 1060 acres annually. Some additional land outside the national forests was burned during this period, but it is safe to say that the total area of forest land burned in the state during the 1909-1951 period was probably not more than half of the area reported for 1880, of 113,820 acres.

From the foregoing it is obvious that some of the early day objectives of the Association have been accomplished. Lest some of our members think that the Colorado Forestry and Horticulture Association, which, since 1944, has been the successor to the Colorado State Forestry Association and the Colorado State Horticultural Society, now is interested only in horticulture and gardening, it seems desirable to point out some of the conservation and forestry projects on which we are working.

The establishment of a State Park System is an active project on the Association's program. Colorado is one of the few states that has no state parks, other than Fort Garland and Pike Stockade historical monuments. Enabling legislation, an administrative setup to handle state parks, and the acquisition of several proposed areas are steps in the program, which Mr. Russell C. James and Mrs. Charles R. Enos, chairman and co-chairman of the committee have in mind.

Under the leadership of horticulturist George Kelly, the Association has taken an active stand in the preservation of the integrity of our National Park system. Our membership, with its appreciation for scenic, aesthetic, and recreation values, can act as a balance wheel between over-enthusiastic engineers, who too often see water only for its value for power

*Continued on Page 49*



### MRS. JOHN EVANS

President of the Association for eight years. A large part of the success of the Association since its reorganization in 1944 has depended on the efforts of Mrs. Evans. She has contributed much financially to purchase and furnish Horticulture House and she has contributed much monthly to keep it running, but probably even more valuable than this has been her willingness to serve as president for this long period. No one else could have kept all the varying interests working together harmoniously as she has done, for everyone liked to work with Mrs. Evans. She never asked anyone to do anything that she was not willing to do herself. Her contribution to the advancement of Horticulture in her beloved state has been great, and many people have been shown the way to happier lives because of her work.

In her usual modest way she would not give us a picture of herself or even submit a story, but we found this one and believe that it rates the space given it and much more. Thank you, Mrs. Evans.

## JOHN SWINGLE

## ON WHOM TO DEPEND

THAT doorbell again! During the morning's rush — getting the youngsters ready for school or later while dressing for a luncheon — it rings! The sound of the doorbell is most irritating, however, when enjoying a cozy little nap; suddenly bringing there goes the bell again! Hastily donning a robe you rush to the door to be greeted by "Ma'am your evergreens are a gonna die if they ain't sprayed right away," or "This or thata tree will fall on the house if you don't have us yank it out," or "Thata tree down yonder a stretch needs trimmin'." Trees are farthest from your thoughts at the moment, and you make your escape back to your nap and pray that the arms of Morpheus will again enfold you in pleasant slumber.

Just as you have dozed off again you are rudely interrupted by the doorbell which, at this point, has assumed the proportions of clarions in the town hall. You again don your robe and while fumbling for a missing slipper, the bell peals again! You rush down with one foot bare, only to find another treeman who presents a card and begins a lengthy discussion on how he can "fix up your trees." He suggests, among other things, his cure-all spray which kills all types of insects *on* or *in* the tree and lays great stress on his guarantee (verbal, of course) and the fact he is *licensed* and *bonded*.

You again make your escape, but not to return to your nap. You, as a homeowner, are naturally concerned with such threats to your fine trees. They are important to your home and the approach of these self-styled experts, whom you don't know and whose reputation is difficult to check, leaves you befuddled. You feel some-

thing should be done for your trees and in this state of mind you are probably a sitting duck for the next approach; unless these constant annoyances have made you too irritated to give them any consideration.

The moral of this story is simple. The reputable arborist does not solicit and approaches your door only upon invitation and at your convenience. He has an investment in the community and will advise you what is best in the way of tree care. Since trees play such a vital part in the health, beauty and comfort of the home surroundings, serious consideration must be given to their well-being. If you are one of the new residents in the city and unfamiliar with good tree practice, it might be well to have the guidance of competent non-commercial advisors; such as the City Forester, County Agent or Horticulture House. Personnel at these sources will gladly help you make an intelligent decision.





**BILL LUCKING**

## THE USE OF HEDGE MATERIAL

**W**HEN considering hedge material, the first ones of which we think are the privets. Privet is probably used more than any other shrub for hedging, but there are also a good many more shrubs and trees that can be successfully used.

Let's list these shrubs by low, medium, and tall. Lodense privet is used more than any for low planting, as it can be trimmed close, and is good for border and design work. Cinquefoil or Potentilla, Gold Drop, can be used for a low hedge, but will not stand much drought. Columnberry Barberry can be grown as a low hedge, and will stand trimming. Plant this barberry up close to a wall and see what a nice effect you get.

For medium hedges, there are a number of shrubs one can use. Polish privet is a good medium hedge, hardy and a good substitute for Amur River privet. Dwarf Ninebark, another good shrub for hedging, should be used more and will stand trimming, but does not like too much shade. For the informal hedging that does not need a lot of trimming, try *Spiraea Arguta*. In the early spring with its white flowers it is quite a show. *Cotoneaster acutifolia* is a good shrub to be used for hedges as it has good foliage, will stand trimming, is hardy and colors up well in the fall. Try it.

For a tall hedge or screen, there are a number of shrubs which can be used. English privet will grow tall and is the best of all for a formal hedge. Hawthorne makes a good hedge. The variety *Coccinea* is the one to use, as it has good foliage and colors up well in the fall. It will take quite a lot of trimming, wants well drained soil, and not too much shade. Lilacs are good for hedging—espe-



cially the Persian, which is a good bloomer, has good foliage and will not send out a lot of suckers.

For a very tall hedge or screen, use Russianolive. For the real dry area, Chinese Elm is the answer. When planted close and trimmed it can be made into a very beautiful hedge.

Evergreens make good hedge material. Try the Foxtail Pine for something different. Blue Spruce can be planted and trimmed to be made into a good hedge. Pfitzer and Savin Junipers, with trimming, will make good hedges. *Scopulorum Juniper* can be grown into a good hedge, but watch for the aphids and red spiders. All of the material mentioned here will do well in this area.

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A complete collection of hedge plants, sheared in various forms, can be seen at the Morton Arboretum, not far from Chicago.

ANNA R. GARREY

## A DESERTED GARDEN



**T**HIS is the story of a foot-hill garden and how, after almost fifty years it remains still a living memorial to the man and woman who made it.

About thirty miles away from Denver, far from any highway, George Elbert Burr, the artist, and his wife, selected a spot on which to build a mountain cabin. So hidden and inaccessible is the place that we still wonder at the courage they had in gathering the materials for this tiny house where they spent many summers, and where Mr. Burr did many of his water colors and etchings.

A lone pine on a rocky cliff outlined sharply against a far horizon; the pale illusive color of the great plains in early autumn; the little house itself, under the cliff—these he has left us in his pictures, vividly for remembrance.

It perched like a little brown owl

on the steep hillside, this tiny house, as if, in the dusk of an evening, it might rise and float off over the mountain slope to the moonlit plains beyond.

Only the adventurous dared leave the road, which was high-centered and rock strewn, to follow a trackless way across a mountain meadow, through the long leaved pines and on, somewhere, to find the beginnings of a rough trail which led to the cabin.

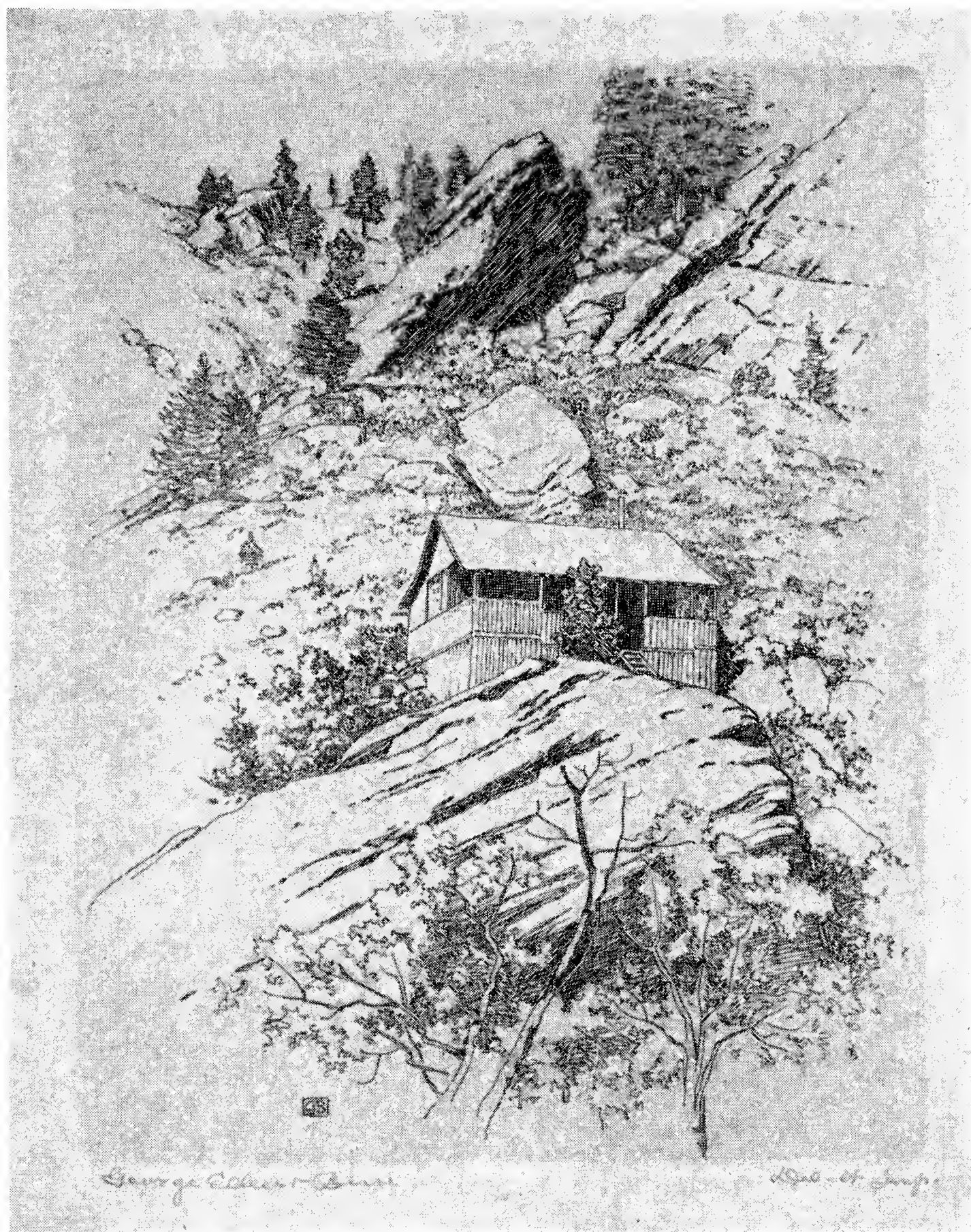
So unfrequented was the way that the forest seemed a virgin forest with high meadows scattered in its midst. Here spring beauties came earliest on the sunny slopes, then Pasque flowers, then bush clematis, in the marching seasons, and Mariposa lilies in their time. Catnip marked the site of a forgotten cabin where the path took a sudden steep ascent.

Glorious how the endless mountain, sloping sharply to the west, seemed to catch the morning sun in its chalice, or how, at evening, its long rays slanted eastward over the plains, which lay with the quietness of the open sea under the inverted blue bowl of the sky.

In the deepening ravine, where the mountain maple and the quaking aspens began and the yellow pine of the lower slopes gave place to the spruces of the higher levels, a tiny stream appeared trickling to disappear thru patches of blue-grass like, miniature garden plots, while the trail climbed steeply below towering masses of rock.

This was an invitation to adventure, for here grew chokecherries in green clusters, Oregon grape, with its holly shaped leaves, and mountain mahogany, — hardy western growth staunch for the burning sun and sudden afternoon shower, and always





there was the unmistakable scent of sage and pine.

Where, in such a land of spruce and aspen could a fox-glove find its way? Yet, there it was for unbelieving eyes to see, one perfect spire, shining white in exotic beauty by the little stream.

At this unusual sight the path was

forgotten for the possible treasures of the stream bed. Soon lovely rosettes of new young plants appeared with promise of another season's bloom. Then more spires of white, of lavender-pink, of deeper red foxgloves came in sight.

No thought of the little brown house then, until, suddenly, it was

there, high above us on the steep hillside, as the dell widened and the stream slowed to a small pool bordered with mertensia and ferns, with Sweet William, foxgloves and meadow rue in profusion.

Across the narrow brook, beneath the shelter of a high boulder, a "twisted stalk" grew, its drooping branches and pendulous, brilliant berries filling a perfect nook, and the thistle-like flowers of a yellow scabiosa looked oddly at home.

Not far above this bower the water flowed under low arches of dense alder until, at last, the austere height of the mountain rose like a final barrier, and here, the stream disclosed its source, — a perfect spring flowing freely from a small rocky cavern. A drink of the crystal water and then a last, steep climb along the hillside to the house beside a giant spruce.

There, in the enchanted morning hour, Oriental poppies spread their flaming banners over the landscape, as much at home as on some far Italian hill,—hundreds of them naturalized on this remote mountain, lovelier than in any garden close.

Years passed, and, deserted at last, the little house brooded in the length-

ening shadows of the great cliff above it, while the gay blossoms flamed on the hillside and the sun made magic colors on the distant plains.

There is not a trace of it today. It was burned by thoughtless intruders.

Yet, still, the garden remains,—alien, nostalgic and beautiful in its loneliness, and when the spring night-wind sings through the green tipped spruces, the spires of the foxglove rise along the stream bed, and June brings the poppies back in long remembrance.

### MUSIC IN THE TREES

By A. REYNOLDS MORSE

There is a land where music grows in trees.

The music is the sighing of the pines!

The many-singing voices of the breeze

Are sifted, gathered—all eternal lines—

And rendered in one soft, melodious song

Unto the conscious, or unconscious, ear.

And to these changing, needled lays,  
belong

Still other songs. When windy stars  
shine clear,

The countless whispers of the aspen leaves

Become evasive songs, and pass away

Almost unheard. But from eternal sheaves

Of still unwritten music, winds will play

Forever, rhapsodies and musics light,

And awesome harmonies in storms at  
night.

SCOTT WILMORE

## WHAT TREE SHALL I USE?



THIS could cover a pretty wide field if we were not considering the Plains Area only. Apparently we do not have the selection of hardy types of trees here in Colorado that each and every one of us wishes we had. It is not necessary to go into detail as to what we can't use, but rather which are the best of those that have proved hardy and stand up under our trying conditions at this altitude.

For parkings, any of the following, which are listed in the order of my



own preference; Red Oak, Thornless Honeylocust, American Linden, Schwedler Maple, Sugar Maple, Augustine Ascending Elm, Green Ash. It does not follow that these are the only trees that could be used for parking trees, but for one reason or another the other trees with which I have had experience have been eliminated. As an example, a Soft Maple should not be used in the parking where you have sidewalks, as sooner or later the roots are bound to heave the sidewalks. Again, certain neighborhoods, through restrictions and otherwise, would want a parking tree of less height than those mentioned above. For this group I would recommend any of four or five varieties of Hawthorns, Flowering Crabs or Mountain Ash. However, we still do not recommend for the Denver area the Mountain Ash, as it just doesn't thrive here like it does in other localities.

Of shade trees for lawn specimens, of course, the most popular tree, or at least the one we get the most calls on, is the Cutleaf Weeping Birch. Again the Red Oak, Schwedler Maple, European Birch (either single stem or clump), Moraine Locust, American Linden, possibly the Weir's or Skinner's Cutleaf Maple (if proper care is taken in watering, to keep the roots well down in the soil) could well be added to this list. Russianolive, if situated properly, is also a nice tree for ornamental purposes, especially for the contrast of foliage to other trees, I do feel however that the Russianolive is more suited to country estates or farms, along with the Chinese Elm, Cottonless Cottonwood and Weeping Willow, which should never be planted in the city.

Now I know there are many trees not listed in this article, and the reader will wonder why they were not mentioned, and I can answer by

saying that there are definitely more trees that could be added to this list, but for some reason, as previously explained, they are eliminated. In a general way, the trees I have included are more satisfactory under existing conditions in the mile high altitude.

Some trees have been eliminated due to the difficulty in transplanting, such as the Little Leaf or European Linden, the Black Walnut (unless previously root pruned), Sycamore, Horse Chestnut and Ohio Buckeye—the latter two being terrifically subject to sun scald as well as the difficulty of transplanting). Of course you can add many more to this list, all of which could be used under certain conditions and in certain locations.

Fruit trees were not considered in this article mainly because of their slowness of growth, even though they are necessary to various plantings; they do definitely have their place in the back yard, however. Where a line or background of trees is desirable, the Augustine Ascending Elm would fit into this better than any other tree that I know of at the present time. Lombardy Poplars, and especially the Bolleana Poplars are out for this area.

In closing this article I hope I have not injured anyone's feelings by omitting his favorite tree, but we have had such a wide experience in the use of trees in the Colorado area that I feel that the trees recommended above will best serve the purpose.

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An important part of the Botanical Garden of Berne, Switzerland, is located in the Swiss high Alps at Schynige Platte. Here the home owner can find out the names of all the native plants, and can see what sort of conditions are required for their growth.



*Scene above from the garden of Mr. and Mrs. Chas. Gates. Showing good use of various ground covers. Photo by Mr. and Mrs. C. Earl Davis.*



HELEN FOWLER

## GROUND COVERS FOR MANY CONDITIONS

*With Some of Their Ornamental Associations*

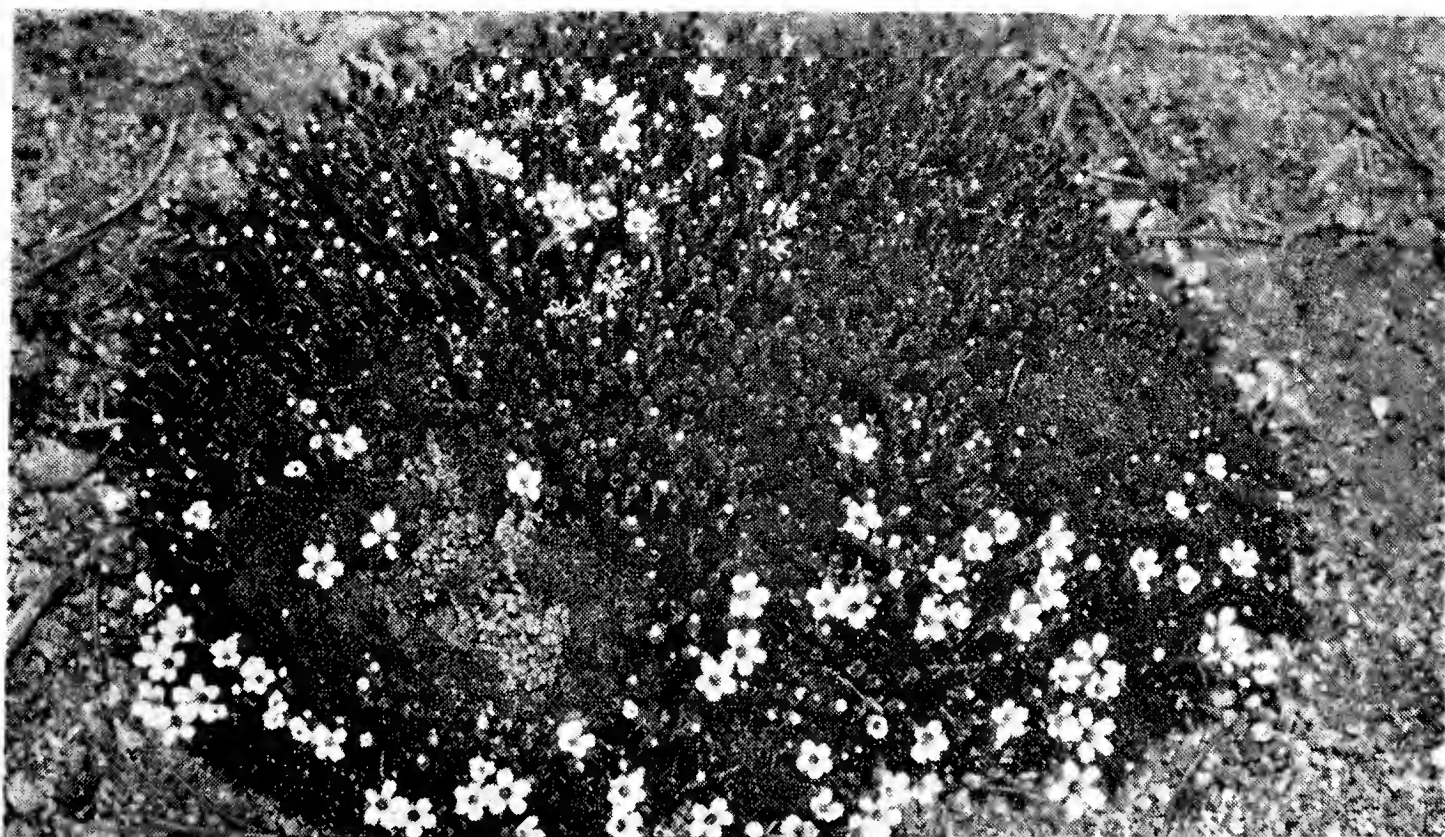
**Y**EARs ago, we heard very little of ground covers. There is hardly a new garden built, today, where plans are not made for their use. In nearly every garden there are raw-earth places that are not pleasant to look upon. The lack of light under shady trees and the heavy drip following snows and rains kill the grass year after year. In other places, the top roots of trees take all the food intended for lawn grasses. There may be steep banks facing the noonday sun and banks in the shade that are constantly giving the gardener trouble and expense. In choosing covers for such places, we should be interested in their habit of growth, their density and attractiveness of leafage, so as to keep them good-looking for as long a period as possible. In this relation, their habit of growth, is perhaps one of the most important factors so we should pick out from the low-growing types, only those varieties which make close mats of foliage or which have creeping or spreading growth. A ground cover is not wholly confined to trail-

ers, creepers and vines for there are several classes of plants for covering ground beside the low-growers; such as, shrubs, semi-shrubs and perennials, including ferns of all kinds, columbines, funkias, saxifrages and many others of similar heights.

Back as far as 1927, even earlier, the list of plants for that time was brief. These plants proved satisfactory then, as they do today. The list included ajuga, with its clear blue flowers in early June. The kind then known, was from Geneva, but a new kind with bronze foliage has since been introduced. Using both *A. genevensis* and *A. brockbanki* in one planting makes a smart effect. Myrtle also combines well with ajuga. This myrtle *Vinca minor* (there is a *V. major* also with larger leaves and larger, bluer flowers) is a well-known evergreen—evergreen only if protected from the winter sun—used for covering banks, terraces or planting in large beds under trees, as well as interplanting among shrubs.

We still have more of the older

*Alpine Sandwort, Arenaria sajanensis, a good native ground cover.*





kinds of plants for selection—thymes and sedums; both may touch up the cracks between stones on terraces. Now the sedums—as I go from garden to garden I see only a few, and all the same ones in all the gardens—just a few varieties. Now there are dozens of both gray and green-leaved to choose from—*S. aizoon*, *album*, *altissimum*, *dasyphyllum*, *douglasi*, *maximum*, *middendorffianum*, *murale*, *obtusatum* and the more-used *spurium* in pink, white, dark and light red for both sun and shade. Many know the *S. spectabile* brilliant, valuable for so many situations and for its late bloom. It is in full flower today, October 8. *S. ewersi*, *glaucum* and *seiboldi* have soft gray foliage, with *S. seiboldi* being the aristocrat of the entire *Sedum* group.

For use in the shade, in perennial borders, English primrose with forget-me-nots are the sweetest of spring combinations. For shade or sun, *euonymus kewensis* is an evergreen bittersweet, of fine texture with nothing better for covering around statues, or birdbaths or small pools. It does not transplant easily except in pots on account of its single root system. It is not a large plant so should be selected for small places. Then, there are English and Baltica ivies, Hall's honeysuckle and the lovely but questionable *pachysandra*. Here, the *pachysandra* does not grow like it does in the East.

There is one ground cover, though perhaps the loveliest of all, for use in the sun only, which is the dwarf silver-lace vine (*Polygonum reneutria*). Its deep-red buds, seen early, with its light green foliage all summer and crimson foliage in the fall, makes the writer always think of this plant when the "B-r-e-a-t-h-t-a-k-i-n-g" ad comes over the radio.

Lily-of-the-valley is well known, but few know how to care for it. After blooming it should be covered



with well-rotted fertilizer and kept damp. What is done this year will govern its growth for next. *Lysimachia*, the old moneywort, never does well in the sun. It is ornamental for places around pools in moist soil. One of the loveliest for sunless spots is *asperula odorata* and another, the snowdrop anemone, *A. sylvestris*, with its sometimes nodding pure white flowers. The anemone prefers not too dark shade.

If your low growing campanulas are not thriving in the shade, move them to the sun. Here you have over twenty kinds to choose from. *Cypripedium*, (the lady-slipper or moccasin flower), *asarum*, (the wild ginger), *podophyllum*, (the mayapple) *trillium* and many more are rather special in their requirements, preferring a rich, woods soil in the shade.

You will have many areas in the sun where you can plant the following: *cerastium*, *dianthus*, *iberis*, *arabis*, *alyssum*, the various *sedums*, *phlox amoena* and *P. subulata*, *veronica repens*, *euphorbia epithymoides*, *geum triflorum*, *globularia*. Coralbells, *heuchera* retains its good looks the entire summer. It is useful as an outline cover for perennial border margins.

Gardeners should plan to meet the ground covers, which are numbered by the score here in Colorado. You will be glad you know them when you run on to the many places in the garden where just nothing else will qualify.

*Illustrations on these pages, clockwise from upper right hand corner are: Cerastium and Sedums used as a basis for a ground cover on a hot south slope; Lysomachia used in a moist shady place; one of the hardier Buttercups; Myrtle is one of the most dependable plants for the shade; Ajuga, the Bugle, effective for borders or solid masses; Sempervivum, or hen and chickens, is the old standby for dry hot places.*



ARMIN BARTELDES

## IMPROVING ESTABLISHED LAWNS



**T**HE main trouble with old lawns is compaction and what the golf experts call thatch. Compaction or packing of the soil is caused by watering, tramping, rolling, and even the weight of the lawn mower. The soil, in time, gets so hard it will not take up water, and plant foods cannot get down to the grass roots.

Thatch is the build-up of undecomposed vegetable matter; grass roots, clippings, manure, peat moss, etc. If a distinct layer is formed by these materials, water will run off like off a duck's back. Grass roots will be shallow and look out when hot weather hits.

The cure for both situations is aerifying. Aerifying tools are now on the market both in hand models and power models. These tools are hollow tines which take out a plug about four inches wide and one-half inch in diameter. They are more satisfactory than spikers which only

push the soil sideways, and lets it fill right back again.

The aerating holes should be about every six inches. While the plugs are lying on top of the ground, apply commercial fertilizer, scatter a little grass seed (preferably Merion Blue Grass) and drag a mat over the area, or use the back of a rake to break up the small plugs. Do your regular watering, and you are all set.

The new soil conditioners won't benefit established turf.

Fairy rings are caused by a mushroom type of growth. The mycelium, or underground part of this fungus, dries out the soil so that it will not take water. At one point nitrogen is released which gives the circles the dark green color.

I know of no chemical that will counteract fairy rings. Either aerify these spots or dig them out and replace with fresh dirt.

If you will aerify your lawn early in the spring and hold off frequent early watering the grass roots will go deeper, and you won't need to water as much during the summer. If the majority of the people in town would do this, this city could conserve millions of gallons of water and have better lawns.

Don't water your grass until it needs it, and then give it a good soaking. When grass begins to wilt a little and takes on a grayish color, it needs water . . . whether it be August or December.

Water is a precious thing, and some day we could come up short. We should start learning how to conserve it now.

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Fruit breeding is done at the Botanical Garden at Geneva, New York.

**R. E. EWALT****IT'S PHLOX**

George Kelly says directors should  
Fill up some Green Thumb space  
As otherwise there's no excuse  
For being in that place.

Some gard'ners try to grow the things  
That don't do too well here,  
Such plants as broad-leaved evergreens  
Whose acid needs are clear.

Why not grow plants that tolerate  
The kind of soil we have,  
Where alkali predominates  
And acids will not save.

A garden of perennials  
Goes flat as flat can be,  
Unless you grow a lot of Phlox,  
Mid-season blooms to see

I like the kinds that don't grow tall,  
Such plants as Border Queen,  
Whose heads stand straight in spite of  
rain,  
Whose foliage stays green.

There's Mia Ruys, a lovely white,  
It's dwarf and grows quite well,  
And Lizzy Arden, new pale pink,  
Has blooms that sure are swell.

Spitfire is scarlet, gay and bright,  
Columbia is pink  
And it will bloom from those side shoots  
'Til frosted black as ink.

The drying of those lower leaves,  
Where bugs oft get the blame,  
Is caused by the dryness of the roots,  
It's thirst, and that's a shame.

Phlox roots are spindly, shallow grown,  
Roots dry and get too "done,"  
That's why the crowding of the plants  
Improves them, in full sun.

"Protexall" dust is one-shot stuff  
For bugs and for disease,  
And if put on three times a month,  
It solves your plagues with ease.

But here's a point that you should know,  
I've learned it for myself,  
The dust "gunned" on the plants does  
more  
Than lying on your shelf.

Close-planted, with the roots well soaked,  
Well dusted as they grow,  
Will make Phlox do its stuff for you,  
A grand mid-summer show.









LEN SHOEMAKER

## MY FAVORITE TREE

AMERICAN FORESTS, the national Association's magazine, frequently runs a picture and a short article entitled 'My Favorite Tree'. Many trees have been shown, but, so far as I know, they haven't shown my favorite tree. It is the lowly but beautiful quaking aspen. Scientifically known as *Populus tremuloides*, it is commonly called quakie, quaker, quaking asp, or aspen. Other names which I have heard for it are 'Glory of the Hills', 'Mantle of the Mountains', and 'Nature's Nursemaid'. The last name, undoubtedly, refers to the protection it affords to coniferous seedlings, which start, thrive, and grow to treehood within its shady bowers.

Any name applied, however, is usually appropriate, for in its change from barren trunks to green, yellow, orange, and red foliated trees, it is a joy to behold. Its occurrence throughout the Rockies has added much to our State slogan, 'Colorful Colorado'. Camera fans have found a joyous satisfaction in photographing hillsides ablaze with aspen leaves when Jack Frost has changed them from green to gold.

As a timber it is good for box material, matches, and excelsior, and is now being used quite extensively in certain localities where trees of larger size abound. Its greatest usefulness, however, is the part it plays in conserving moisture. Thick stands check the quick run-off of rainfall, and snowbanks melt slowly, allowing the moisture to go directly into the ground.

The following couplets (scribbled while I sat and looked at the beautiful coloration around Maroon Bells) seem to best express my love of the beautiful

*Populus Tremuloides*

Slender and tall in the morning light,  
Their leaves aquiver with joy or fright.

Shady and cool in the blaze of noon,  
They croon a rustling, drowsy tune.  
Somber and gray as the night draws nigh,  
Their fluttering leaves dolorously sigh.

Throughout the summer, a covert preferred

As shelter or refuge by beast and bird.  
Goldenly clustered, in autumn they stand,  
Promiscuously strewn o'er the mountain land.

Barren in winter, with not one leaf,  
Seemingly filled with a hopeless grief.  
Reanimated by spring's gentle call,  
They burst into life with leaflets, small.

Fairest of trees that our forest includes,  
They seem to portray all of nature's moods.

—LEN SHOEMAKER

The New York Botanical Garden has been responsible for a great many highly important findings on leaf-feeding on roses and other plants.



M. WALTER PESMAN

## SEEDS FOR ICELAND



A HARVEST moon had risen behind us, hanging over a snowy mountain peak that still showed pink from the sunset. Wind began to hit us straight in the face. There was that long, long, even ridge to the west, and the wide river between. Way up the valley I could glimpse the snow-covered bulk of Snaefell.

We crossed lots of little streams; some had dug ditches one or two feet deep, often burrowing right under the turf, causing the horses to sniff suspiciously when they heard it tinkling along underground.

After a windy downhill stretch the warm pocket in the wind reassured us that soon we would find all the things that had been promised — a natural birch woods with trees towering up to 30 feet high, a school hotel where we would be taken in for the night.

Thus Joy Coombs, formerly of

Denver, now in Iceland, describes her trip to the Hallormsstadur nursery, the biggest of the three tree nurseries operated by the government of Iceland.

While the only native tree is the birch, these nurseries are proving that a variety of pines and spruces, as well as larches can be grown. The oldest evergreen in Iceland is a 45-year-old spruce nearly a foot in diameter. The tallest tree is a spindly larch about forty feet tall.

The original copious growth of natural birch has largely disappeared; partly fed into the winter's fireplaces, partly burned out by volcanoes, partly tramped out by the sharp hoofs of free-ranging sheep. Now the question is how to restore Iceland's tree growth.

And that is where we can help. Sigurdur, the Iceland forester at the Hallormsstadur nursery, has shipped out about 250,000 seedlings to the eager Icelanders this year. They are all interested in reforestation and it is hoped that the Hallormsstadur nursery will be able to increase the annual crop of seedlings to two million.

That takes seed from other places. How would you like to ship a couple of hundred thousand seeds of our native high-altitude trees? After all, high-altitude corresponds to high-altitude.

The Iceland soil is good, there is plenty of water and there is enough sunshine for many different types of trees.

We have already shipped a large collection of Engelmann Spruce seed, collected just below timberline near the old Monarch Pass. It would be the best "Good-Neighbor Policy" to

help little Iceland in this reforestation.

Incidentally, you'll be surprised how many ways there are of collecting evergreen seeds, from finding squirrel hoards to heating the cones in order to "free" the tiny seeds from underneath the scales.

Interested? Phone Horticulture House for further information or send the seeds directly to the Iceland Tree Nursery of Hallormsstadur. Forester Sigurdur will do the rest.

If you need a slogan, how about: "Transplant the Rockies to Iceland"?

## EARL SINNAMON

# FOREST TENT CATERPILLAR INVASION IN 1953?

**W**E ALL remember the caterpillar epidemic of this past spring and may be wondering if the same thing will occur next spring.

Ordinarily the insects cause serious damage two or three consecutive years, depending on the weather conditions and the effectiveness of natural parasites. You can check your trees and shrubs right now. The egg masses are about one-half inch long, completely ring the twigs, end squarely at each end, and are coated with a gray glue-like substance.

The young hatch about May 15th to June 1st, depending on the season, and begin feeding immediately. Heavy infestations can strip a yard very quickly.

Although the trees and shrubs will releaf the same season, they are stunted in growth which makes them more

vulnerable to secondary insects such as borers and winter injury.

Valuable trees and shrubs should be sprayed with a stomach poison before the insects have eaten all their foliage.

If they are many egg masses on your trees and shrubs you can expect a caterpillar invasion unless weather conditions and parasites reduce the population before next spring.

## YOU CAN DO SOMETHING ABOUT CONSERVATION

Possibly you do not see how you can help to preserve our soil, forests or water, but you **CAN** do something about preserving the beauty of your state and community by being especially careful in collecting native greens for Christmas or even when buying them.

Be sure that your Christmas trees have been cut under approved conditions by looking for the approval tag of the U. S. or state foresters. Do not break off cones, boughs or other decorative material along the highway or any place where it will destroy, in even a small degree, the beauty of the mountains. Christmas greens cannot be gathered just anywhere, for all land belongs to someone or some government agency and permission should always be obtained. It is much more fun to go out where the beauty is, anyhow, than to just bring it in to your homes.











# RUTH WARING AND CHARLOTTE BARBOUR

## WHAT NOT TO PUT IN A SMALL NEW GARDEN

*The Views and Opinions of Two Elderly,  
Pollen-Allergic Ladies*

THE usual problem harassing new home owners who are about to embark on the creation of a landscaped garden is what plant material to put in it and how to choose from the wealth of trees, shrubbery and flowers offered by nurseries and catalogs.

In this particular instance, however, the problem will be different although not any easier. These sadder but wiser garden builders are influenced by three dominating thoughts: how to avoid hard work, how to avoid hay fever and how to avoid the over-crowding and subsequent taking out of material which has grown too big for its space.

We have tried to reduce these thoughts to chart form, giving the reasons for the eliminations. Some of these "eliminations" may seem drastic, but please bear in mind that we are referring to a small garden.

### Plants To Be Ignored, and Why

#### Trees

Key: A—Too great Size  
B—Untidiness  
C—Irrigating Pollen

Elm, A  
Cottonwood, ABC  
Soft Maple, A  
Poplars, AB  
Weeping Willow, AB  
Russianolive, BC  
Pine, A  
Spruce, A  
Peaches (not hardy)  
Pears (not hardy)

Some trees are border-line cases such as the Russianolive which is a



*Drawing by Anne Arneill Mueller.*

picturesque tree of lovely coloring but does have untidy habits and bears pollen irritating to certain people. Another is the Hawthorne, a beautiful tree, which is alternate host to a fungus disease harmful to Junipers.

#### Shrubs

Key: A—Poor Shape  
B—Too Much Care  
C—Little Landscape Value  
Honeysuckle, ABC  
Siberian Pea, AC  
Snowball, BC  
Highbush Cranberry, ABC  
Sumac, A

We will banish from the garden shrubs which have a rangy habit of growth and require continuous trimming and spraying.

#### Perennials

Key: A—Poor Habit of Growth  
B—Too Much Care  
C—Irritating Pollen  
Phlox, AC  
Delphinium, AB  
Peonies, B  
Day Lilies, A  
Fall Asters, AC  
Chrysanthemums (too seasonal), C



Golden Glow, A  
Mertensia, A

When considering the continual well-cared-for appearance of the garden we frown on perennials that are attractive only at flowering time and which have ugly foliage afterward or are unsightly at their base. Heavy, coarse flowers are also banned, as well as those unfortunates which attract insects.

### Annuals

Key: A—Poor Appearance  
B—Awkward Size  
C—Much Care  
D—Irritating Pollen

Marigolds, ABC  
Calendula, BCD  
Nasturtiums, AC  
Sweet Peas, ABC  
Cosmos, AB  
Pansies, AC  
Rosymorn Petunias, AC

With the workless idea in mind we will not include annuals that require constant picking of heads or those that are rangy and spreading.

### Vines

Key: A—Poor Habit of Growth  
B—Too Large  
C—Poor Appearance  
Wild Clematis, AC  
Honeysuckle, AB  
Silver Lace Vine, AC  
Woodbine (Virginia Creeper), ABC

The vines that "take over" and have to be rooted out of the flower beds regularly, we feel are no asset.

This summary of objections may give the impression that our point of view is entirely negative and that we will end up with no garden at all! In order to show that we have some likes as well as dislikes, here is a list of a few chosen favorites that will be planted in this well-tailored, easily-worked, sneeze-proof garden.

### Trees

Selected for their suitable size, landscape value, color, and shade.  
Littleleaf Linden  
Norway Maple

Russianolive (planted as far as possible from the house)  
Flowering fruit trees (crabs, purple plums)  
Fruit bearing trees (require spraying but are both attractive and useful)  
Mountainash

### Shrubs

Selected for their compact habit of growth, clean-cut foliage, color and bloom.  
Lilac (all varieties)  
Quince  
Double Mockorange  
Privet  
Snowberry  
Low Junipers  
Dogwood

### Vines

Selected either for their small, neat foliage or beauty of bloom.  
Boston Ivy  
Euonymous  
Purple Clematis  
Climbing roses (some people are susceptible to rose fever)

### Perennials

Selected for a number of good qualities—neat habits, handsome appearance, combining well with other flowers, fragrance, long blooming season.  
Spring flowering bulbs  
Iris  
Roses (must be sprayed)  
Lilies  
Shasta Daisies  
Garden Pinks  
English scented violets  
Ferns  
Lilies-of-the-Valley  
English Primroses

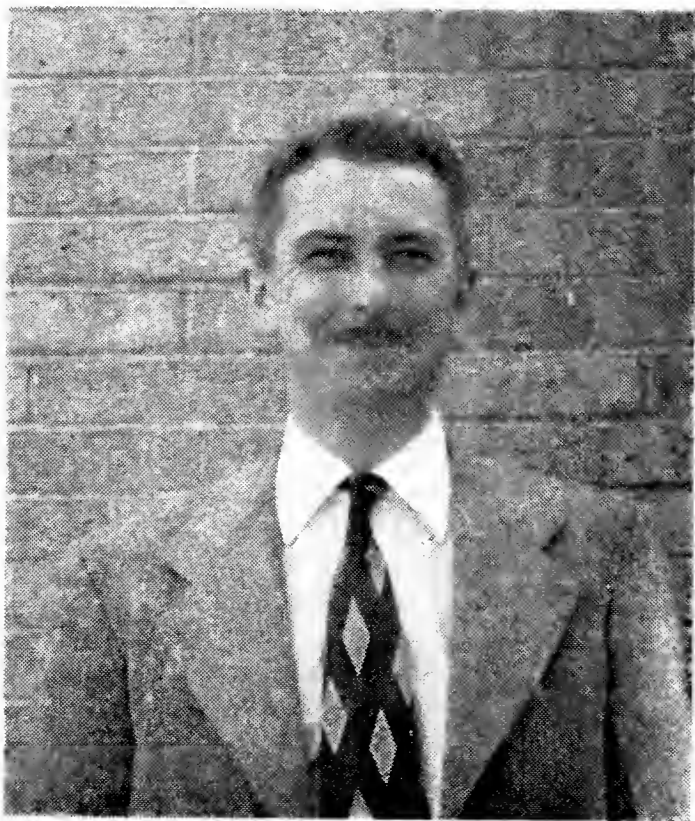
### Annuals

Selected for their size and shape, their variety of color, their cutting value, their blooming season, and their relatively small demands.  
Gas Plant, Dictamnus  
Zinnias (all types)  
Salpiglossis  
White frilled Petunias (some care but worth it!)  
Sweet Williams  
Iceland Poppies

Gardeners reading this will realize that there are many gaps in our suggested lists. Those present are our personal favorites.

MORAS L. SHUBERT

## THE MIRACLE OF THE DORMANT EMBRYO



A student in an elementary college science course recently remarked that the lectures and reading assignments were having an effect on him that surprised him greatly. He said that he had previously thought that religion was something that he could get along without, and that he certainly did not expect a course in science to make him feel more religious. But to his amazement, he had found that with each new scientific fact learned he was becoming more and more aware that there is an underlying order of nature that seems to give proof of divine guidance.

When we give serious thought to some of the every-day phenomena that we take too much for granted, we begin to appreciate that some of them are true miracles. We gardeners have many opportunities to observe some of these.

Take seeds, for example. Every "green thumber" has planted seeds

and watched them germinate and grow into new plants. But too few of us have appreciated what a wonderful thing it is that a seed, produced by its parent plant, can lie in storage, withstand heat, cold, and dryness for months, yet when placed in a warm, moist environment will begin to sprout in a short time.

A new plant has been born from that apparently lifeless seed! There is no better example known of living tissue being able to lie dormant for years, then suddenly spring into renewed activity when placed in a favorable environment.

There are unquestionable records of seeds having germinated after a storage period of over 150 years. We periodically read reports of lotus seeds that are apparently thousands of years old being able to germinate, but most of these spectacular accounts have later been proven questionable if not false.

But we have only to see the seedlings from the embryos first formed in seeds only one or two years ago to appreciate this miracle. Suppose that all seeds should lose this ability to lie dormant. All of our annual plants would be lost, unless we were able to plant the seeds as soon as they were formed and carefully save the plants through the winter in hot-houses. In a climate such as ours this would not be practical, and we would soon be relying upon perennial plants altogether. That would mean the losing of most of our vegetables, many of our beautiful garden flowers, and nearly all of our crop plants.

So whether a seed is able to remain viable in a quiescent state in storage, or in a dormant state in contact with



the soil, we owe much to this most fortunate provision.

Have you ever examined the structure of a seed? Well, you do not need a laboratory to learn something about them. Take a large dry bean and soak it overnight. Then with a darning needle carefully slit the seed coat and remove the embryo. Pull the two fleshy "seed leaves" apart and find the tiny primary axis, to which they are both joined. If a magnifying glass is handy, use it to examine the minia-

ture leaves and root sprout. You may even be able to see the veins in those leaves! Now consider that here, in this compact bit of dormant living tissue are stored all of the minerals, food, hormones, and enzymes that are necessary to get a young plant started upon its way to independence. Now try to imagine what an exceedingly tiny spark of life is contained within a petunia seed or a poppy seed!

Can you think of anything *more* miraculous than this?

**MRS. FRANK McLISTER**

## BRIEF SUMMARY OF TODAY'S CONSERVATION NEEDS

**O**UR renewable national resources are soil, water, forests and wild life. Our non-renewable national resources are minerals, oils, and gases.

We should do everything possible to prevent soil erosion, safeguard our water supplies, guard against fire, protect wild life, plants and trees.

We should learn to use our non-renewable national resources economically and keep them fully productive for our present and future needs. Urge the teaching of conservation of national resources in our schools. Help establish conservation bookshelves in schools and in the libraries.

Specific examples of conservation which are currently of interest to us are those of the Alaska Eagle and the Florida Key-deer. The Eagles, which were nearing extinction, because of a federal bounty paid for each dead bird, now have a chance for survival, as the bounty has now been nullified by action of the Secretary of the Interior. The National Audubon Society has done extensive research and made great effort to preserve our na-

tional emblem. Eagles do not do significant damage and are an important tourist attraction. We should also help to prevent the extermination of the little Key-deers in Florida as they are exceedingly rare and are a tourist attraction.



ROBERT E. MORE

## THE ELECTRIC WIRE PROBLEM

OVERHEAD electric wires in the city must be accepted as inevitable, at least for many years to come. We cannot have light, heat, power and telephone without poles and wires. Because they are unsightly, the first thing we do in landscaping is to try to plant them out. We usually

defeat this purpose by planting the wrong tree in the wrong place. Trees grow and certain of them grow fast and for many years. If they are planted directly beneath wires, it will be but a few years only before the tree has to be mutilated; then the property owner not only doesn't have



his screen but he has an ugly tree besides.

The same thing often happens through inadvertence. A beautiful spruce is planted directly under wires, not for a screen, but solely as an integral part of the landscape design. Enforced mutilation of a tree like this is little less than sacrilege. In either case had the designer or planter looked ahead and given thought to the growth habits of the tree in question, he either would have selected a



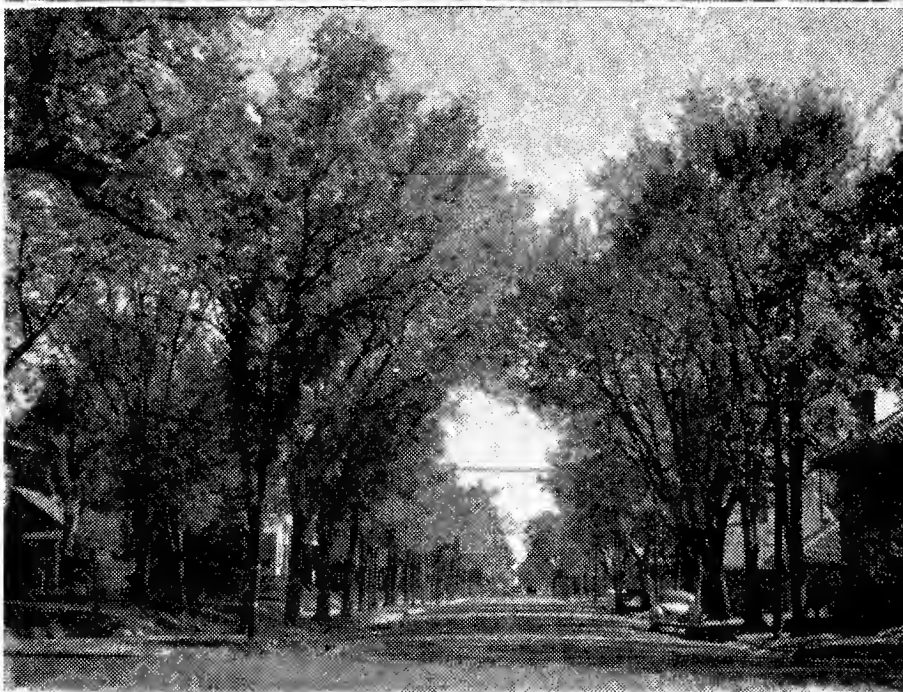
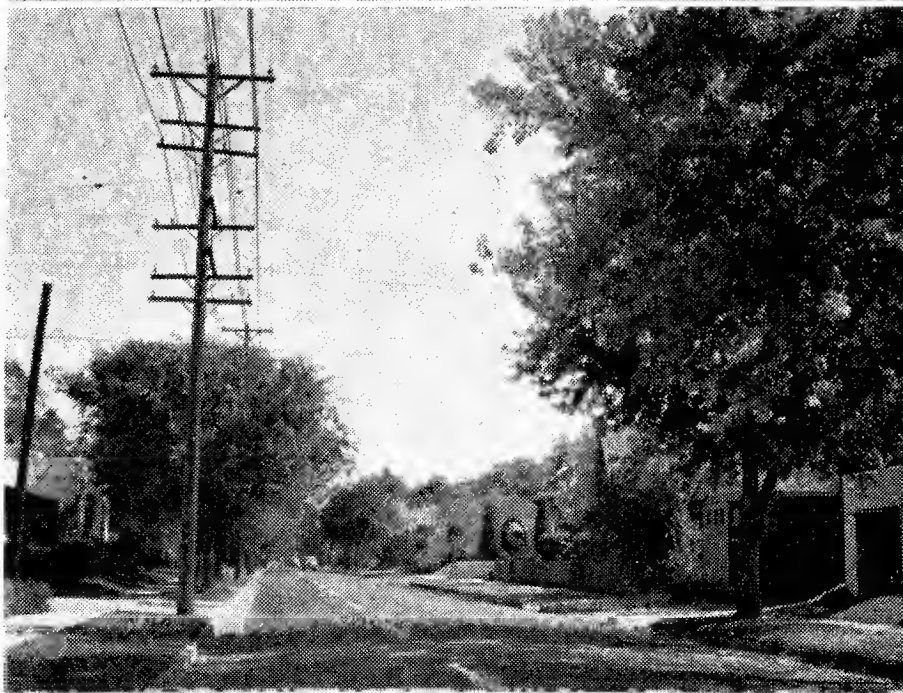
*Illustrations 3, 5.*



different tree or changed its location slightly. Sometimes wires creep in on us after we have moved in, particularly in new districts. If we remember that the Public Service Company tries to run wires east and west along boulevards and streets and north and south along alleys, and particularly if we taken the added precaution of calling the utility company before landscape plans are finally crystallized, we can usually guard against surprise.

Denver is famous for its beautiful street trees. The picture below (Cut 1) of 17th Avenue shows conditions we can be very proud of. But the same type of planting cannot be done on East 14th, on the north side of the street; the soft maples planted directly under the wires in the accompanying cut (Cut 2), have been topped annually until they are only grotesque caricatures of what a tree should be. Each year conditions will get worse. Sometimes it is necessary to lop off one-half of a tree and let the other half grow as depicted in Cut 3. The small maple in the foreground is already up to the wires and will soon have to be mutilated. The large elm a little beyond, has had all of that portion of the tree next to the street completely lopped off. The large branch to the right has been allowed to remain. The elm just inside the wires, however, is growing beautifully and will never be mutilated.

Cuts 2 and 3 both illustrate the fine type of tree surgery that is now being carried on by the Public Service Company and the Telephone Company. Top flight tree specialists are on annual retainer to do this work, for which the home owners of Denver are grateful. But even the most skilled tree trimmer cannot keep a large tree directly under wires a thing of beauty. The Tramway Company too is doing its utmost to preserve the natural beauty of the trees. Cut 4 shows the splendid pruning that has been done along the trolley lines on



*Illustrations 1, 2, 4.*

East 23rd Avenue. However, if those trees get larger, they will of necessity lose more and more of their symmetry.

The Russianolive enveloping the post in Cut 5 effectively screens the post. A few years from now it will have little screen value, however. Had it been planted only slightly further inside the wire, it could have grown to maturity without mutilation.



*Dramatic example of trees mutilated to provide for wires. Photo courtesy Ed Scanlon, Editor of Trees magazine.*

MRS. ROBERT PERRY

## GARDENING—IS IT A REMEDY OR A DISEASE

By R. G. H.

FIFTEEN years ago my doctor husband prescribed gardening as a hobby in order to get me out in the sunshine and fresh air. I had always loved flowers; that is, to look at in the house, but an outdoor garden presented an unknown problem. So in early April I ran out and planted "this" and "that" which had looked most attractive in the spring catalogs. Come June, I eagerly watched for flowers, but found I could not even find "this" or "that" or even whether

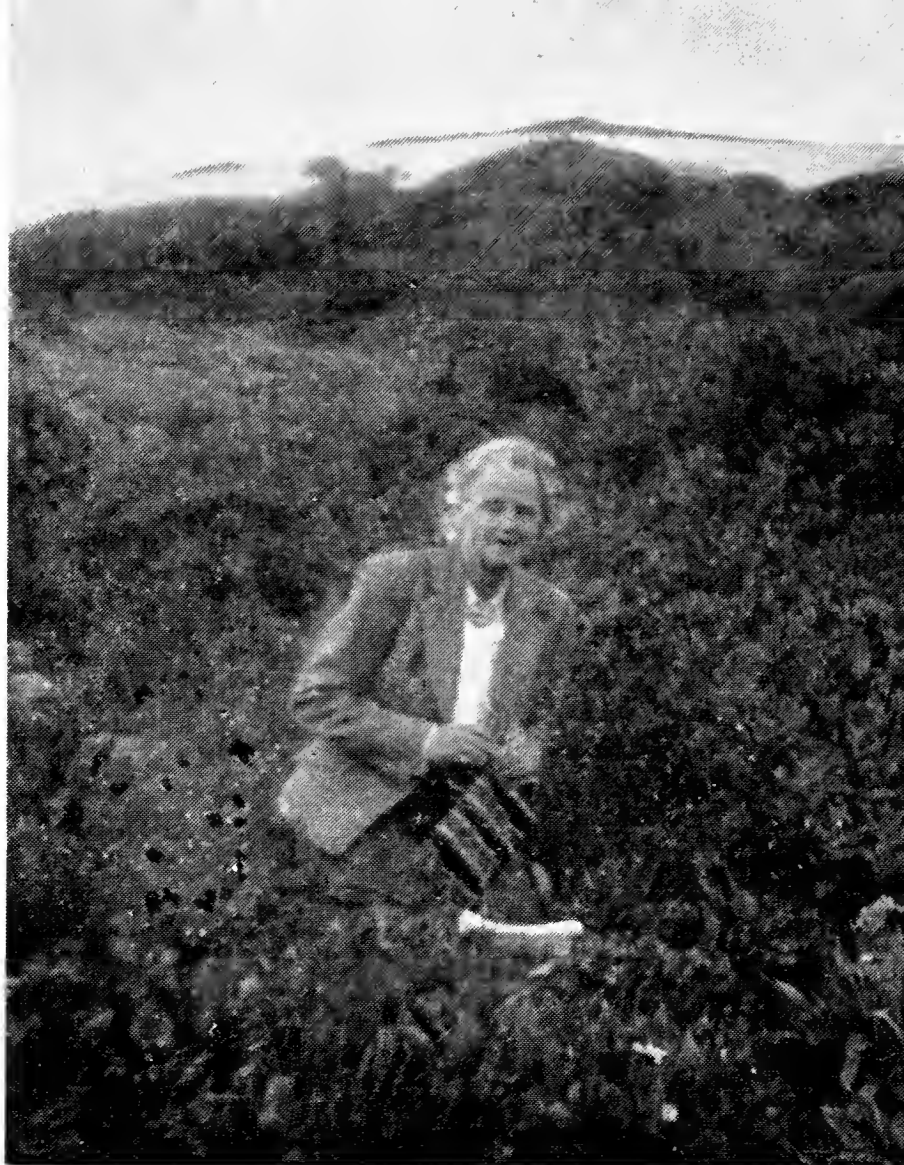
they were present in the flower bed!

This all seemed a rather futile experience, and my efforts, except for annuals showing a sample of their bloom when obtained, languished until I finally was smart enough to get a "plan" toward which I might aim. With a great deal of help from my husband and son in the construction of beds and planting of shrubbery, gardening became interesting and a project. Seed properly planted and marked, and plants in a dormant stage



when planted actually answered the descriptions in the catalogs when they finally matured. It became increasingly interesting as results proved successful in appearance, though at first it was pretty much by chance that the right heights, the right blooming times and the right colors were coordinated.

Gardening was certainly a remedy. But the whole idea stimulated my curiosity and my energies. The literature on my table changed from current fiction and biographies to garden and home magazines—piled high because the work in my own garden kept me too busy to read about others. In enlarging and improving I've turned stone mason, carpenter and sculptor, which in turn made a course in painting and design seem a necessary step. From annuals (I am trying seeds from those I have never seen) to raising perennials from seed—trying roses, lilies and unusual bulbs and shrubs, I am now branching out to a cold frame and small green house with orchids and anthuriums. Not all my trial plantings turn out well and many I personally do not think attractive, but at least I know what the plants are when I see them mentioned and have a much more definite idea about what I want to concentrate upon. I'll never live long enough to try everything I would like to try.



*Mrs. Robert Perry gave us this picture of herself and got a ghost writer to write her story.*

Now after fifteen years, as the way with all living things, many of the shrubs and plants have passed their peak or overgrown their positions and I am gradually removing and replacing, I hope with more pleasing effects as a result.

My husband? He is quite sure gardening is a disease—and my only regret is the fact it does not seem to be a contagious one as far as he is concerned.

## Tagged Christmas Trees—Evergreen Decorations

An excellent selection of tagged trees in all sizes—Colorado Pine, Douglas Fir and Grand Fir—in either natural green, snow flecked or painted. Beautiful Holiday Wreaths for all interior and exterior decorations.

Visit Our Christmas Shop and Christmas Tree Lot at

**2799 North Speer Blvd.** at Your Convenience

**McCOY & JENSEN**

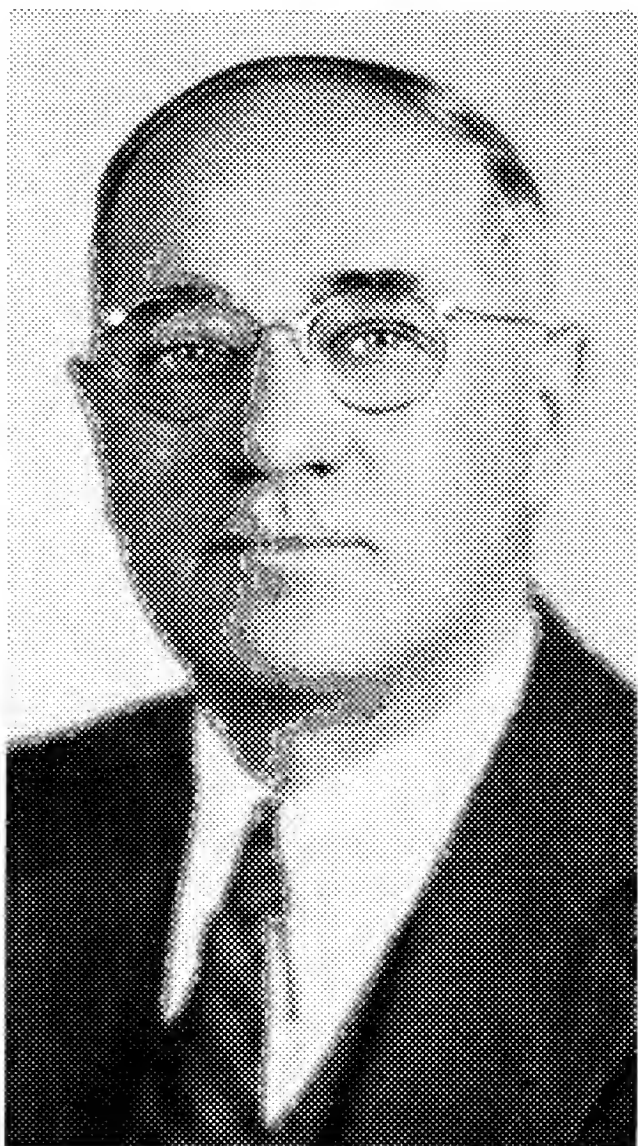
**2799 North Speer Blvd.**

**GLendale 4288**

Nursery on the Morrison Road (Highway 285)—Westwood 1407

S. R. DeBOER

## CLARENCE F. LEACH—AN UNUSUAL MAN



IT is a pleasure to write a brief story about Clarence Leach who died in Sedalia, September 3, 1952. I had known him for many decades. As an independent thinker he contributed some major items to our civilization, and I would like to tell about them because they also tell his life.

Mr. Leach did his own thinking. As George Kelly said at his funeral in Sedalia, he liked to drink his knowledge directly from nature's springs. Most of us like to have our drinks chlorinated and take them from taps in fancy glasses or cups. Applying this to original thinking, you may say that we are all in a rut using the type of chlorine and the type of cup which

someone has invented for us, rather than drinking directly from the natural spring of science.

This original thinking did not always bring him friends, but it certainly made his life valuable to our and future generations.

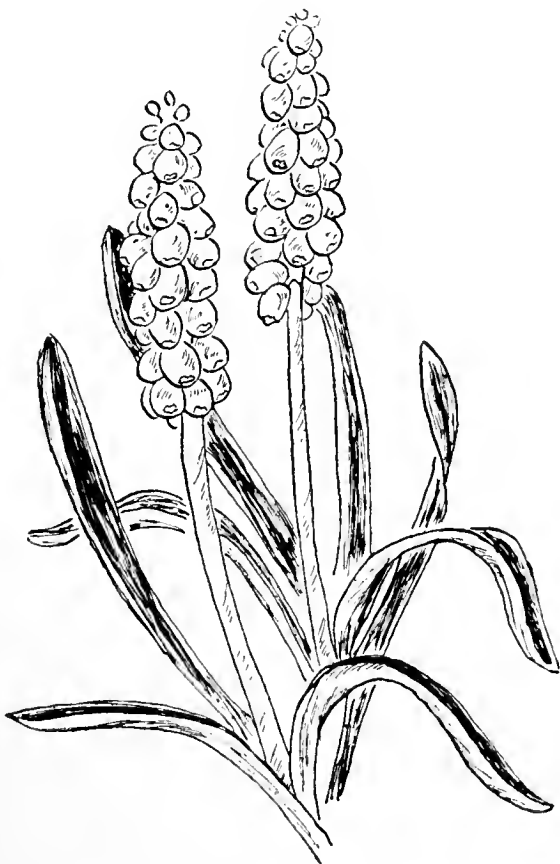
Many, many years ago Mr. Leach tried to acquire a right-of-way for his ranch on Garber Creek. In doing so, he found some very unusual items in the law by which public streets and highways are created. One thing he found was that at the time of the adoption of the United States Highway Law, there was a clause by which any existing trail which was then in use would become a public right-of-way of 60 feet in width. He endeavored to apply this law to his own problem claiming a right-of-way over an old trail. Lawyers did not think that such a thing was possible. The two lower courts, county and district, did not recognize his claim that the road to his ranch had been an Indian trail and was used by early explorers, and, therefore, was an official right-of-way. I remember this incident very clearly because Mr. Leach took his case to the State Supreme Court. Not having much money, he raised the \$15 necessary for a filing fee by private subscription. The Supreme Court of Colorado upheld his contention and his right-of-way became an official road.

In the early years of the depression, an effort was made to build a parkway along the foothills of the Denver region. It was to run from Boulder through Morrison and Perry Park to Palmer Lake and the Garden of the Gods. Surveys were made along this whole line, and Mr. Leach was em-

ployed for part of the right-of-way work. The matter of the park-way became stalled in political discussions and was finally dropped. But Mr. Leach's theory proved that at least a 60' right-of-way for this line was available for a considerable length. This right-of-way would not have been sufficiently wide for a park-way, but would have made a beginning for a scenic road which would have benefited this part of the state greatly.

Mr. Leach applied this same principal of park right-of-way also to trails along creeks which could be made available for public fishing in the streams. He circulated a petition trying to get this matter on the go, but like so many important things, it received a good deal of valuable moral support but not much else.

I have felt for a long time that these matters should be known by the people of Colorado, because as time goes by they may become more and more important and this unusual man's contribution to the welfare of the people of this state should be recognized.



*Grape Hyacinths, Muscari armeniacum.*

## S. R. DeBOER DUTCH BULBS

So much is said about Dutch bulbs in advertisements lately, I feel that I would like to explain a few things in regard to them. Most of the ads today are in connection with the small bulbs and do not refer to the major tulip and narcissus bulbs. In recent ads some of the following are mentioned.

*Ixia* is a small bulb which produces flowers of about a foot high and of different shades. The bulbs sell for about four to five cents apiece. They are not quite hardy in our climate and should be grown indoors.

The Arctic Orchid is a very early iris and a small form of the Dutch Iris. The color of the flower is very delicate and could be compared with that of an orchid.

Pearls of Holland must be the Grape Hyacinth which are perfectly hardy here and well known to our gardeners. They sell for five to six cents apiece.

Double Flowering Cup of Gold I presume is the Double Crocus. They are very hardy here and well known to gardeners. They sell from five to six cents apiece.

The Viking Lily is a new name which I presume, from the picture, must be the Siberian Scilla which is well known to gardeners and sells for five to six cents apiece.

The Foolish Maidens of January I presume are the Snowdrops *Galanthus nivalis*. These are the earliest flowers in spring and every one should have a few of them.

Most of the bulbs as advertised are hardy except the *Ixia*. They are all being sold under brand new and very interesting names.

**HERBERT GUNDELL****HOME GROWN FRUIT IS TWICE AS GOOD**

**T**HE fruit tree has been an important part of the American home grounds for many years. Early settlers on the American continent brought along the seed and the saplings that constituted the early-day generations of our present day home garden fruit trees. Although architecture and landscape design have gone through consistent revolutionary changes, the fruit tree still maintains its popularity and its place in the American home garden; its popularity is due to its multiple uses.

A fruit tree offers the advantage of shade, it enhances the landscape with its snowy beauty of blossoms in the spring and completes the fall season with a beautiful display of colored fruit and tinted leaves. The home fruit tree belongs.

There are many kinds and even more varieties of fruit trees that the home gardener may choose from. It is difficult indeed to make a logical

and correct selection, for environmental conditions, climate, exposure, and soil conditions all must be considered, in addition to pollination, insect and disease problems. Let us assume, therefore, that you are Mr. or Mrs. average home owner with a landscape development on two lots. From this assumption we will further consider that your garden and your landscaping program may include two or three fruit trees.

The first important consideration then is your personal choice or preference, but in the same breath, we must include some limitations. Both climatic and soil conditions limit our selections in most instances to three major kinds of fruit trees: the apple, the sour cherry, and the hardy plum. These fruit trees tend to reward the conscientious owner with a fine crop of fruit, about three in every four years. Assuming that the average lifetime of a fruit tree is 25 years, they would furnish the home gardener with many enjoyable crops over a productive span of 20 years.

Yes, why did we omit peaches, sweet cherries, apricots, and pears? Simply because these trees often live less than 20 years and yield the gardener only four or five crops in the same span of years.

The apple is probably one of the most reliable home fruit trees. Abstain from dwarfed varieties because they are not too well adapted to alkaline soil conditions in the semi-arid West. Consider not only your personal preference for a table apple variety but consider that only few apple varieties can produce fruit if planted without pollinator trees; and, too, consider resistance or susceptibility to fireblight, a dread bacterial disease. The best sour cherry for



many years has been the Montmorency; it is widely grown and continues to perform well. Select only the hardy plums—particularly the more recent hybrids which were produced and originated at the North Dakota Experiment Station.

In protected locations whenever space is not a limiting factor, a peach tree may be tried and will produce provided climatic conditions continue to be favorable over a period of years. Polly has proven somewhat more hardy than most commercial peach varieties. Pears are difficult to grow in our soils, are much more tender to cold than apples and extremely susceptible to fireblight disease. Sweet cherries are self and inter-sterile and must be planted again with special pollinator trees, a matter which is horticulturally too involved for home gardeners.

May I recommend that if there is room for two fruit trees, one should be an apple and one a sour cherry or a plum. If there is room for only a single tree of medium height, a Montmorency cherry should be a very rewarding selection. Again, I should add that your individual preferences are most important in making a proper fruit tree selection. In spite of area limitations or other basic factors you should be able to find exactly what you want from that ever-increasing selection of good fruit tree varieties. Home grown, you know, is always twice as good!

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## OTHER DIRECTORS

Since the following directors did not supply us with a story, picture or an ad, we will fill their space by telling something about them.

### LE MOINE BECHTOLD

Mr. Bechtold is nationally known as a grower and breeder of Iris and Hemeracallis.

### GEORGE CARLSON

While he was in Colorado Springs he brought us in over a hundred new members. He also was responsible for setting up the three Botanical Reserves near Colorado Springs.

### MRS. E. R. KALMBACH

For many years Mrs. Kalmbach took the responsibility of classifying and mounting the herbarium specimens which were collected or donated to Horticulture House. Her committee often met for a few hours every week and worked on the herbarium. She was also very helpful in answering questions about gardens and house plants.

### MRS. J. KERNAN WECKBAUGH

Mrs. Weckbaugh has assisted many times at Horticulture House and conducted a one-woman campaign for members at a new shopping center southeast of Denver.

### MILTON J. KEEGAN

Mr. Keegan's outstanding contributions to the Association and to horticulture in the Rocky Mountain area are his long efforts to obtain a satisfactory working agreement with the City of Denver for the establishment of a botanic garden, and his very complete and beautiful Lilac Issue of the Green Thumb in 1944.

### PAUL MORROW

Ten years ago, or so, when the parent of this Association, the Colorado State Forestry Association, was struggling to survive, Paul held it together almost single handed for several years. We might never have been able to effect the reorganization of that venerable organization and make this new, virile one, without his efforts.

## PAULINE ROBERTS STEELE

# FUN WITH GOURDS

"I GREW them," proudly declared our young Cub Scout as we admired a shallow bowl of ornamental gourds. "When they are cured I'm going to make some puppet heads out of these egg-shaped ones. I know a puppeteer who has a whole show and every puppet's head is made of a gourd."

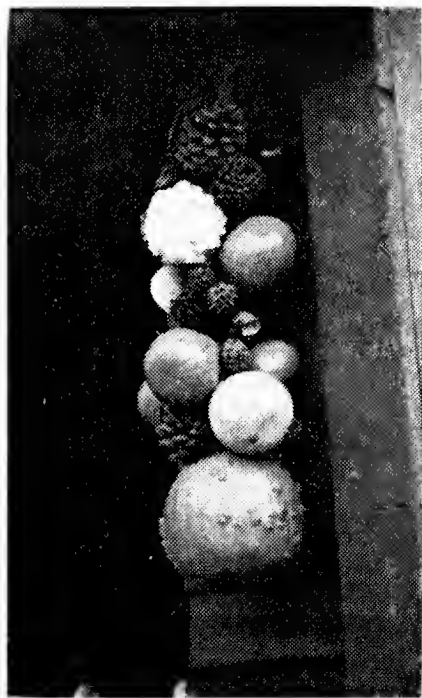
What to suggest for a young aspiring gardener in his first venture? Include some gourds. They are easily raised and there are so many crafts to which they lend themselves. There are bird houses, charm strings, leave-a-note boxes, and as our Cub Scout was telling us, even puppet heads; the list is almost endless.

The culture is simple: average good garden soil, preferably on the sandy side, and an open, sunny situation. Of course a fence, trellis or some sort of frame for the vines to climb insures well formed fruit. When they are permitted to touch the ground an ugly blemish is often caused. Start with a good package of small, ornamental gourd seed. It is a great disappointment to grow a crop of giant gourds if you are planning to use them for charm strings and small

craft work. Just as soon as danger of frost is past plant the seed. Our growing season in this area is short to bring them to maturity. To lengthen the growing period one may start seed in flats and transplant to the garden. However very good gourds can be grown here by planting the seed directly in the garden. Also, this is a simpler and easier way for the inexperienced child gardener.

More people seem to have difficulty in curing gourds than growing them. First be sure to grow the gourds to full maturity and successful, easy curing is almost assured. Before a gourd is harvested it should be hard, hard enough that a thumbnail cannot press or mar it. The writer has seen gourds that have matured and been left on the vines well into the winter. These were pulled from the old, dry vines, wiped free of frost and snow and with very little more curing were used in craft work. However much of their color had faded. By close inspection in the autumn, gourds can be pulled after they are matured and still retain their bright colors.

Store in large, shallow trays or boxes where there is a good circulation of air. Gourds are so colorful and have such a variety of shapes that they make interesting arrangements used alone or with other dried material. There is a small loss of uncured gourds being used in this way. Occasionally one will develop a spot of mold. Wipe it clean with a soft cloth and the gourd is seldom lost. Any excessively moldy or decayed gourd should promptly be removed from the others. Do not puncture the hard outer skin in an effort to hasten the drying. It may hasten the drying of some but your losses will be greater.



The gourds are cured, now, make some of these.

**Charm strings.** Sand the gourds lightly. Drill two small holes in the tip of the neck. Thread a string or wire, corsage wire is excellent, through these for hanging the gourd. Paint with a bright enamel. Also, shellac some and use them in their natural colors.

**Bird house.** Decide what birds you wish, and are likely, to attract and select an appropriate sized gourd. Cut an opening to accommodate that bird. Consult a book on bird houses. They have charts regarding this. Clean all seed and fiber from the gourd. Drill small holes in the bottom for drainage. A coat of shellac will water-proof the gourd.

**Leave-a-note box.** Saw off one side of the gourd. Drill small holes in the side of this "door" and corresponding ones along the edge of the opening. Lace with a leather thong. Your door is nicely hinged. Drill holes in the neck of the gourd and run a loop of the leather through for hanging the box. Place a pad and pencil inside.

**Puppet heads.** Select egg-shaped gourds. Drill small holes over the area where the facial features are to be. If a hand puppet is to be made, saw the tip of the gourd's neck off. With plastic wood build a strong collar around this opening. Leave the opening just large enough to accommodate the operator's finger. Dip the finger tips in water frequently and model with plastic wood just as you would in clay. Lock the first layer of plastic wood in the small drilled holes that were made over the face and ears area. Let dry thoroughly. Add more layers to build up the features. Paint. Add a bit of frayed rope or yarn for hair.

Have fun with gourds—you will from the first. Good luck!

*Drawings on this page and back cover by the author.*



## ROSE TUGGLE

# KEEP YOUR CHRISTMAS PLANTS HAPPY THROUGH THE NEW YEAR

**D**URING the holidays most of us receive one or two house plants as gifts. The plants, of course, are lovely, as they come from the green house where they have had the proper care, but after a week the leaves turn yellow and drop. They stop blooming and after a while our beautiful plants are ragged and weary looking. Let us see why this happens and if there isn't something we might do to keep our gift plants blooming and happy.

In the greenhouse the temperature is held on an even scale day and night—forty, fifty or sixty degrees, depending upon the plants kept in that particular room or division. In the home the temperature runs from sixty-five to eighty degrees and at night it sometimes drops ten to twenty degrees. This means that there is too much change in the household temperature to keep plants healthy and blooming. In the greenhouse the temperature is moist and cool, while the room in the home is hot and dry. Have you ever gone deep into a dense forest or high into the mountains and noticed the cool, moist atmosphere? And then, didn't you notice how fresh and green and how alive the plants were? Plants love that cool moist air and they must have it if they are to do their best growing and blooming.

Gift plants from the florist are more sensitive to the change than those propagated in the home. The change of heat, air and moisture between greenhouse or florist shop and the home is usually so great that it is a shock to the plant. Because homes are warmer and the air is drier, gift plants need water often and also need

plenty of moisture in the atmosphere. A pan of water should be kept among the plants and there should be plenty of fresh air daily in the room, but be careful of draughts.

Cyclamen, primroses, azaleas and hydrangeas need a cool room, a sunny window, and plenty of water. Poinsettias and gardenias like a sunny, moist and warm atmosphere.

Give all plants a weekly shower and insect inspection. Plants from the florist are carefully inspected for insects but occasionally one has an insect pest which escaped detection, so be sure to give your plants a thorough going over. Plants that are kept free from insects and given proper care in watering and room temperatures will give many weeks of bloom.

Christmas cherry and pepper will drop their fruits if kept in a hot dry room. They also like a weekly bath.

When the Easter lily is done blooming, set it in a cool place, gradually withholding water until spring when the bulb may be set outdoors in the ground and by fall it will bloom again. It will live indefinitely out of doors. Do not repot it again for indoor forcing unless conditions are just right. It will grow but will not bloom.

Cyclamen are really the most difficult to grow successfully in an ordinary home. In the greenhouse the temperature is around fifty degrees and perhaps ten degrees higher during the day, so they should have something as nearly similar as possible. An enclosed porch that has strong light and very little artificial heat except during the night or in zero weather would probably be the best place for them.

Another very lovely plant and one



which is easier to keep in the house is the gloxinia. It has lily-like flowers which are soft and velvety and appear in rich colors of red, purple, and white. It likes a cool, humid, atmosphere but if given the same care as you give your violets it will bloom beautifully. Give good light but no sun. An east window is perfect.

About the only plants that really do well in the hot dry atmosphere of the house are the cacti, succulents and maranta, or prayer plant as it is sometimes called. These plants really like to live in the house.

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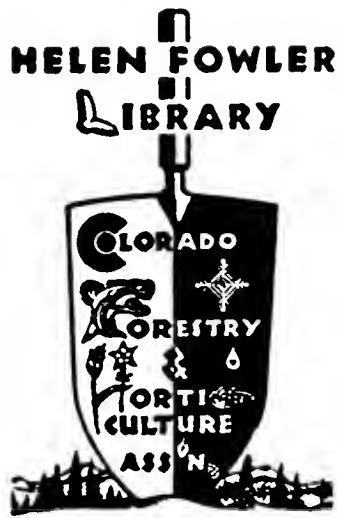
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## MILDRED COOK

Mildred Cook is the Association's Secretary-Treasurer. She is the one officer of the Association who is not also a Director. Her contribution to this Officers and Directors issue is the list of new members below.

## NEW MEMBERSHIPS RECEIVED

October and November, 1952

Mr. Franklin H. Herzberger, 1630 Garfield, Denver  
 Dr. Prather Ashe, 746 Holly St., Denver  
 Mr. and Mrs. David M. Abbott, 361 Ash St., Denver  
 Mrs. Eugene Revelle, 220 Dexter St., Denver  
 Margaret E. N. Beaver, M.D., 746 Ouray, Grand Junction, Colo.  
 Mr. F. L. Grant (Quaker Hill, Inc.) 3424 Sheridan Blvd., Denver  
 Trellis Garden Club, c/o Mrs. Ruth Poitz, 3610 Fillmore St., Denver  
 Mr. Charles Reich, 3600 S. Julian St., Ft. Logan, Colo.  
 Mrs. E. J. Allen, 825 Fillmore St., Denver  
 Mr. John B. Tweedy, 650 Franklin St., Denver  
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 Dr. C. F. Bramer, 702 No. Main, Pueblo, Colo.  
 Mr. L. W. Pfeil, 1131 Olive St., Denver  
 Mrs. G. T. Watts, 1008 No. Kentucky, Roswell, New Mexico  
 Mrs. Stuart Meyers, 3875 Chase St., Denver  
 Mr. Wilfred S. Davis, 5283 Highline Pl., Denver  
 Ludwig & Company, 2739 So. Broadway, Englewood, Colo.  
 Mrs. Ida McCone, 416 Elm St., Julesburg, Colo.  
 Col. W. G. Hawthorne, 48 Marland Rd., Broadmoor, Colorado Springs, Colo.  
 Dr. O. H. Devitt, Rt. 1, Box 496, Arvada, Colo.  
 Mrs. Harry Hanks, 624 E. Vassar Ave., Denver

REBECCA ENOS

## CHRISTMAS DOORWAY DECORATIONS

*Try Your Hand at Something Different*

WHY not branch out this Christmas with ideas of your own for wreaths instead of buying ones which are made up for the Christmas trade?

It seems to be the style nowadays to discount the Christmas spirit as being too commercial. Well, here is one way of saving a bit of money if you happen to feel that way. Personally I don't. I love everything connected with Christmas. It isn't just for children, either. We older people need presents, too. I give them regardless of ages. It makes me feel good.

Enough of that. I am supposed to be writing about Christmas wreaths.

I wish there were contests for the best doorway decorations, instead of for electric light displays. We had a contest out here in the country once, and it was interesting to see how many ingenious ideas came forth. Some of the nicest ones were simple but effective. As I remember, the first prize went to a doorway that had a garland of evergreens looped over it and hung down the sides, and an arrangement of evergreens on the door. It gave the house such an air of hospitality.

Another door had a gay wreath made of Christmas ornaments, mostly colored Christmas tree balls. One had a big candy cane across it, and another was done up to look like a Christmas package, with ribbon and big stickers. My favorite was a big wreath made of different sized evergreen cones.

Last year we made a Della Robbia wreath which was fun to do and was beautiful. We bought a wire frame at a green house, but you could make it yourself. It had two wires running

around it four inches apart, and cross wires between them every six inches. The space between the wires we stuffed tight with wet sphagnum moss, and wrapped around it with string to hold it. This was used as a cushion in which to stick different kinds of fruit. The frame was simple enough to fix and from then on it was fun to see just what would fit and match and stay in place.

We used lemons, oranges, limes, persimmons, red peppers, cranberries, gum drops and anything with colors we wanted. A good way is to select your material at a large fruit stand, where you can compare the colors.

The heavier fruits were stuck on with skewers from the 10-cent store. Others were tied on by running string through on the under side so it didn't show. Smaller fruit such as cranberries we put on with tooth picks. For the finishing touch, we bought a few lemon leaves from a green house, but you may have leaves that would do.

Some one suggested that we shellac the fruit to preserve it and protect it from bees in case of warm weather, but we brought it indoors on very cold nights, and it outlasted the holidays.

It might be fun to make a wreath out of small candy canes, fruit, and Christmas tree ornaments. Another idea would be to use seed pods that are dried up now, and paint just the inside of them in different colors. Combine different sizes and shapes for contrast. Milkweed pods are a nice color and shape. Corn tassels are pretty just as they are, but could be colored for foliage.

Try your hand at something different. Maybe you will surprise yourself!

## MRS. MILDRED STEELE POSTAGE STAMP GARDEN

**I**F you live in a trailer and expect to locate for a season or two, or have a regular garden with an ungardened spot, why not have a garden of miniatures, a "Postage Stamp Garden"? Here, Fancy dwells, and one can have the delicate "little things" that are lost among ordinary plants. The search for suitable material will take you to the ends of the earth—by way of specialty catalogues, and will add a generous store of new information for your enjoyment.

As to procedure, I first laid out the dimensions of the plot to scale. Mine is but 4'x7', and at the end of the first season has more than 50 thriving species, many in duplicate, and it is still uncrowded. I pondered considerably over the possibilities of a cactus and succulent garden, or one with a sunken tub for a pool, just large enough for a pygmy water lily or water poppies, and a gold-fish or two. I finally chose a rock garden to gain more variety in plant selection, and it was truly amazing.

We chose large rocks to get shade and coolness on one side, and the opportunity to build a well drained shelf on the sunny side for *Lewisia*s, a *Sedum* (in pot) and several *Alliums*. *Helianthemums* filled one corner of the "warm side", early spring bulbs and miniature *Iris* the opposite corner, thus gaining foliage for all summer. The *Helianthemums*, being evergreen,

will help out in this respect all winter.

On the cool side of the rocks, I have a very satisfactory evergreen shrub which I haven't identified, a dwarf *Potentilla Fruticosa* (of Siberian origin) a Douglas Fir (in pot). For the smaller plants are *Lily-of-the-Valley* and Royal Robe violets in pots, blue *Polyantha*, *Primroses*, various groupings of *Scillas*, *Chionodoxas*, *Species Tulips* and *Crocus*. A very select spot in the garden, and in reality its focal point, is a rock with a depression large enough to hold water. Almost at once it became a bird bath. Around it are the tiniest of the species *Narcissus* and *Iris*, including our native Blue Eyed Grass (*Sisyrinchium*). These minute *Iris* are lovely beyond belief, yet where could one enjoy them except in a garden of relative proportion? Hardy *Cyclamen* are, too, a new and wonderful experience. They were planted in a large pot to keep the limestone chips confined, that were suggested for their culture.

For other accents, I have two floribunda roses, "Pygmy Gold", which stayed under a foot high and bloomed generously. In the third corner of my garden I have a native Oregon grape in pot, and a group of Dutch *Iris* (Wedgewood). In the fourth corner is a planting of several sorts of species tulips and three Tom Thumb Roses, which hide the tulip foliage during its ripening period, also giving their contribution of elfin roses, in pink, red, and white. For constant bloom all summer until frost, I used *Lantanas*, the pink and gold combination, and apricot colored *Violas*. A Japanese Box and *Serissa* from the Wardian Garden vacationed out here, benefiting greatly as well as providing good foliage around some bare places.





To add a further touch of fantasy, I placed a small figure near the bird bath which I had entitled "Bird Song." Needless to say, our "Postage Stamp Garden" was "first" in our morning round of inspection, and will be a delight for several seasons with few changes.

The plants in the pots were sunk to just conceal the rim, the purpose being to prevent creeping, growing too large, and to confine special soil requirements. Species that needed constant coolness were mulched with small flat stones. In choosing the Species Tulips, I avoided those with heavy foliage. Some of the varieties came in the rarest shades of red-violet and dusty pink.

I mostly allowed the color scheme to take its own course, a poor gardener's trick. I had little data on the blooming times for the bulbs, yet the results were quite wonderful, sometimes cool and quiet, sometimes warm and gay. Anyway, if you have ever loved a Fairy Tale, do try a little garden, and relive some childhood dream.

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*Continued from Page 10*

and irrigation, and over-enthusiastic conservation crusaders.

And then there is proposed legislation providing for the harvest of trees on privately owned lands in accordance with good forestry. Previously we mentioned that the Association tried to stop the slaughter of trees for Christmas purposes back in 1893.

Tree farms, totaling 75,280 acres, have been designated in Colorado during the past year, by private land owners. The largest tract, amounting to 70,000 acres is that of the Trinchera Ranch Company, located south of La Veta Pass. Holdings of the Broderick Wood Products Company, totaling 5,280 acres, near Granby and in Cherokee Park, have also been set up on a sustained yield basis. This is a fine start.

Unfortunately some land owners denude forested hillsides or cut the tops out of trees and it is such practices that should be stopped for the public good. The Association is strong for good land management on forest and range lands, both public and private.

As the Denver Republican said nearly sixty years ago, "The work of the Association is by no means finished and its merits your support."

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## AND A MERRY CHRISTMAS TO YOU!!

SINCE the traditional plum pudding and roast goose are likely to hold the center of attention on Christmas Day, we would like to suggest a few quite delectable old-fashioned "rules" which you may find useful—and fun—during the Holiday Season.

We have discovered what we think is an excellent formula for that old faithful, mulled cider. This soul-softening and toe-warming concoction is a speedy and simple way to recover from a snowy walk through the park or a last chilly dig in the garden.

- 1/2 teaspoon allspice
- 2 inch stick cinnamon
- 6 whole cloves
- 1 quart cider
- One-third cup brown sugar.

Tie the whole spices into a cheesecloth bag and drop into a kettle of hot cider to which the sugar has been added. Let it all simmer until the cider is spicy enough to suit you—tasting is certainly permitted. Serve in brightly colored pottery mugs and top with a dash of freshly grated nutmeg—and if you want to be particularly dashing, float an orange slice on top.

Since mulled cider is more fun when used with good Christmas cookies, you might be interested in one of the oldest cookie jar fillers, the German Lebkuchen.

- 3 eggs, unbeaten
- 3 eggs, beaten separately
- 1 pound brown sugar
- 4 cups flour, sifted several times
- 2 teaspoons baking powder
- 1/4 pound cut citron
- 1/2 pound grated almonds  
(or walnuts)

Combine the whole eggs, egg yolks, brown sugar, flour, baking powder, citron and nuts. Mix, and roll one-half inch thick on a lightly floured

board. Cut into your most Christmasy shapes. Bake on a greased and floured cookie sheet, ten to twelve minutes, in a hot oven (400°). The end result of Lebkuchen is a chewy, spicy, cookie, which improves with age—if you can keep them around long enough to prove it.

A very special, and quite elegant Christmas pastry is this Fruit Roll. We think it is Swiss, and if you know a proper and exact name for it, let us know.

- 1/2 pound raisins
- 1/2 pound dried pears
- 1/2 pound dried peaches
- 1/2 pound dried prunes
- 1/2 pound dried apricots
- 1/2 pound nuts
- 3 times your favorite pie-crust  
recepte—less half the shortening.

Cook your fruits, separately, and with as little water as possible, until very tender. Add a little sugar only where you particularly need it (apricots, perhaps). After cooking, drain, and seed where necessary. Pour all fruits together, add nuts, mix thoroughly, and set in cool place for 24 hours.

Make up your pie-crust—remember to halve the shortening—and divide in six portions. Roll crust medium thin, in an oval shape. Pile cold fruit mixture in center in long narrow mound. Fold over one side of pastry, then the other, and then fold up the two ends—seal crust with finger dampened in cold water. Brush top with whole egg, prick with fork to let steam escape, and bake at your regular "pie" temperature until crust is done. Wrap the rolls in waxed paper, and store in cool place. They will keep almost indefinitely.

To serve, slice and top with cognac sauce. Happy Holidays!

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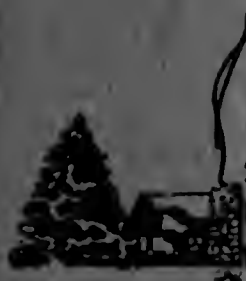
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